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ABSTRACT

This document is the second report on results achieved in the project, "The Acquisition of Integrated Qualifications for Professional Work and Study--An Assessment of Innovative Approaches in Seven European Countries (INTEQUAL)," which was undertaken to identify innovative approaches to granting dual qualifications that can ultimately increase the attractiveness and status of initial vocational education and training. The report's chapters are as follows: "Summary" (Sabine Manning); "Introduction" (Sabine Manning); "Integrated Learning Processes: Germany, Norway, Sweden" (Goran Arman et al.); "Possible Role for Synoptic Assessment within Vocational Education Pathways: England" (Alan Brown); "Facilitating Progression to Higher Education: England and the Netherlands" (Alan Brown, Trudy Moerkamp, Eva Voncken); "Tracing Careers: Austria, France, and Germany" (Henri Eckert et al.); "What the Austrian Partner Learned from the Project INTEQUAL [Was Wir als Osterreichischer Partner aus dem Projekt INTEQUAL Lernen Konnten]" (Monika Thum Kraft); "Lessons Learned--An English Perspective" (Alan Brown); "National Conclusions for France [Conclusions Nationales: France]" (Henri Eckert, Jean-Louis Kirsch); "Internal Bavarian Conclusions [Schlussfolgerungen aus Bayerischer Sicht]" (Werner Kusch); "National Conclusions [Nationale Schlussfolgerungen]" (Rainer Bremer, Gerald Heidegger); "The Netherlands: National Conclusions [Conclusies uit het Leonardo Project INTEQUAL voor het Secundair Beroepsonderwijs in Nederland]" (Trudy Moerkamp, Eva Voncken); "Norway: Conclusions [Norge: Konklusjoner]" (Tor Bergli, Egil Froyland, Lillian Larsen); "The Swedish National Conclusions [Nationella Slutsatser: Sverige]" (Goran Arman, Robert Hoghielm, Owe Liljefelt); and "Lessons of Mutual Learning" (Sabine Manning). Many papers include substantial bibliographies. Appended are the following: list of authors and partner institutions; table of contents of the first report of results achieved in the INTEQUAL project; and outline of the project. (MN)

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QUALIFICATIONS WITH A DUAL ORIENTATION TOWARDS EMPLOYMENT AND HIGHER EDUCATION

A COLLABORATIVE INVESTIGATION OF SELECTED ISSUES IN SEVEN EUROPEAN COUNTRIES

INTEQUAL REPORT II

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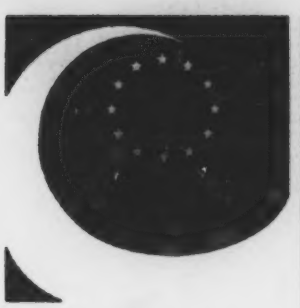

Leonardo da Vinci

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INTEQUAL REPORT II

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November 1997

WIFO (Research Forum Education and Society), Berlin

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The report is the product of the combined efforts of 16 authors from seven countries. Their contributions in preparing the individual chapters and offering advice on the overall comparison are gratefully acknowledged. Particular responsibility for coordinating topic groups and editing the collaborative STUDIES OF SELECTED ISSUES (chapters 3 to 6) has been taken by **Alan Brown**, **Egil Frøyland**, **Werner Kusch** and **Monika Thum-Kraft**.

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Chapter 1

SUMMARY

Sabine Manning

1.1 THE AIMS OF THE PARTNERSHIP PROJECT

§ 01 This project takes up the issue highlighted in the action programme LEONARDO of how to increase the attractiveness and status of initial vocational education and training. One approach initiated in a number of countries is to provide the option for trainees or students of vocational courses to acquire qualifications for university access alongside their vocational qualifications.

§ 02 The resulting qualification opens up alternative routes into professional work and advanced studies, providing a dual orientation towards employment and higher education (DUAL QUALIFICATION). The project focuses on an in-depth analysis of a selection of recent schemes of dual qualification which have been implemented in seven European countries.

§ 03 The comparative investigation includes:

- Schemes which extend over an integral part of the whole educational sector such as the vocational programmes or streams within the comprehensive school systems of Norway and Sweden;
- Schemes which refer to individual courses or qualifications, e.g. the Vocational Baccalauréat (Bac Pro) in France, the General National Vocational Qualification (GNVQ) in England, the long courses of senior secondary vocational education (MBO) in the Netherlands and the WIFI Academy courses in Austria;
- Schemes representing pilot projects within the established systems of vocational education and training (Germany: Bavaria and Brandenburg).

§ 03 The analysis of dual qualifications comprises three major **ASPECTS**:

1. the functioning of dual qualifications in the context of the education system and the social and economic framework of the countries;
2. the educational issues implied in the schemes of dual qualification, particularly in relation to the learning process, the validation of competencies and individual guidance;
3. the transfer of the qualitative innovation achieved in these schemes to mainstream vocational education and across national systems.

§ 05 The investigation of the **FIRST ASPECT** (in phase one of the project) has resulted in the following HYPOTHETICAL CONCLUSIONS:

The evidence implies that the various ways of combining general and vocational education are fairly independent of categories of courses or easily adaptable to the different options. This could suggest that there is considerable opportunity for the exchange and transfer of experience across schemes and national systems. It is also apparent that the schemes of dual qualification apply to and indeed create both innovative course structures or curricula and varying didactic approaches, all of which are of significance for the qualitative advance of vocational education and training.

1.2 COLLABORATIVE ANALYSIS OF SELECTED ISSUES

§ 06 The **SECOND ASPECT** of analysis focuses on selected issues of dual qualifications. The following ***TOPICS*** are selected for carrying out collaborative investigations of the schemes across groups of countries:

§ 07 • ***Integrative learning processes*** *(Germany / Brandenburg, Norway, Sweden)*

This study focuses on the conditions and methods which promote integrated learning processes generating dual qualifications. At the classroom or workshop

level the partners look into how teachers organise the learning conditions, both between and within subjects. One important learning approach expected to generate integrated competencies centres on task-, problem- and project-based methods. Research methods applied include observation, interviews, questionnaires and matching different models of organisation and tuition.

The following conclusion is drawn: National policy-making has to decide whether there should be prescribed curricula, i.e. a system of curricula guiding learning processes which ensures administrative control - or if there should be more responsibility granted to teachers, trainers and students. More autonomy and responsibility to teachers and students for shaping the learning processes and their outcome, would bring the educational world (schools) closer to social life and the world of work.

§ 08 ♦ ***synoptic assessment*** *(England)*

Synoptic assessment is devoted to testing candidates' accumulated understanding of a subject (the vocational area) as a whole. This study is related mainly to GNVQ in England, although experience and views from other countries are also taken account of. The issue is of active policy interest, since the intention is to introduce an element of synoptic assessment into GNVQ in the future.

Synoptic assessment could play a role in helping address a number of current assessment concerns. Assignments, tests and the portfolio could all have synoptic dimensions and encourage achievement of higher order skills of analysis, synthesis, evaluation and the like, and provide evidence of a student's overall grasp of the subject area.

§ 09 ♦ ***skills for higher education*** *(England, the Netherlands)*

This investigation looks at issues around the progression to higher education of students from senior vocational education (mbo) in the Netherlands and GNVQ programmes in England. The researchers draw their findings from their own investigations together with secondary analysis of research on the knowledge, skills and personal qualities required for success in higher education. The concern is how to increase prospects of progression to higher education while also

maintaining an orientation towards the labour market as a fundamental aspect of a qualification with a dual orientation. The concluding comparison results in challenges for the schemes in both countries.

§ 10 • ***tracing career developments*** *(Austria, France, German / Bavaria)*

This investigation intends to determine to what extent dual qualifications influence the ultimate vocational career paths taken by graduates. One focal point is to assess the proportion of graduates entering industry-related jobs as against those choosing to pursue university studies. The evaluation draws on results stemming from research data compiled in the states in question, including individual personal data and evaluations following completion of dual-qualifying education, and data on the educational measures involved.

There are substantial differences between the schemes with regard to the character of the courses, the scale of participation and the original data bases used for the investigation. Even so, the results of the comparative study reveal the potential of dual qualifications for enhancing the participants' educational and professional mobility.

1.3 LESSONS OF MUTUAL LEARNING

§ 11 The **THIRD ASPECT** of the investigation is devoted to lessons of mutual learning. All partners involved in the project set out conclusions relevant for their specific national context. These conclusions covering the whole project are guided by the question: "What can we learn from one another?".

§ 12 A key question for assessing the nature of the lessons is the extent to which they depict specific characteristics of dual qualifications. These characteristics include, above all, the interrelation of general and vocational education and the dual orientation towards employment and higher education.

In the group related to the design of the schemes, lessons specific to the dual orientation are at least quantitatively in a minority. Instead, the majority of lessons drawn on the curriculum, the learning process and structure of courses

could be characteristic of any high standard education, in particular vocational education. Typical examples of these lessons are the acquisition of key qualifications, the provision of core subjects and the development of independent learning skills.

This result is most important in two respect. It shows the relevance of basic qualities of learning for the success of dual qualifications. At the same time, it suggests that schemes of dual qualification are able to have a broader significance for the transfer of good practice within vocational and general education.

§ 13 The survey shows that various lessons are drawn across schemes of widely differing character. Altogether, lessons from each "provider" scheme extend over the majority of "recipient" schemes. This broad spectrum of lessons is particularly revealing if related to the hypothetical conclusions arrived at in the first phase of this project (see § 05).

It may be concluded that there is considerable opportunity for the exchange and transfer of experience across schemes and national systems. It is also evident that the schemes of dual qualification apply to and indeed create both innovative course structures or curricula and varying didactic approaches.

§ 14 The results of this collaborative comparison are of significance for the qualitative advance of vocational education and training. They provide a stimulus for further discussion with specific target groups (policy makers, researchers and practitioners) and for carrying out pilot projects between partner countries.

Chapter 2

INTRODUCTION

Sabine Manning, WIFO, Berlin

2.1 GENERAL AIM OF THE PROJECT

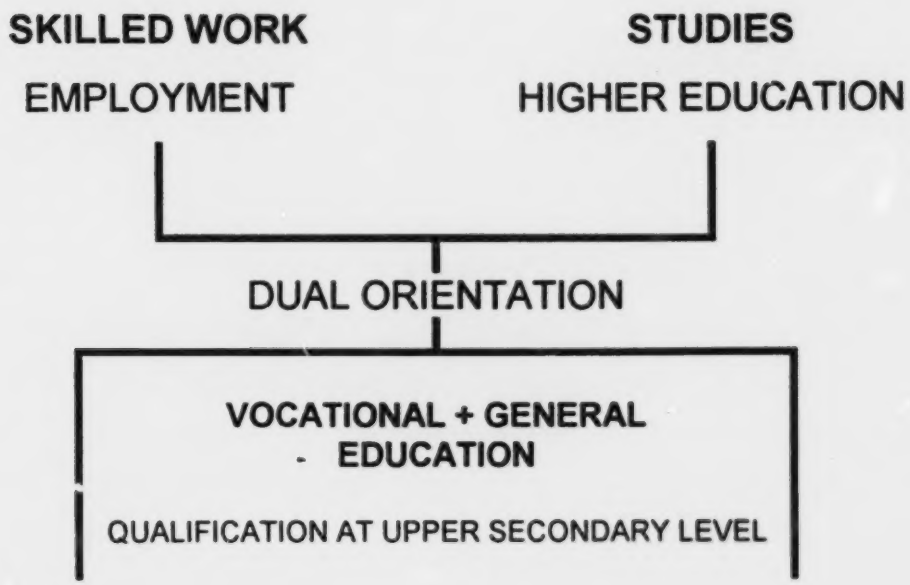
This project takes up the issue highlighted in the action programme LEONARDO of how to increase the attractiveness and status of initial vocational education and training. One approach initiated in a number of countries is to provide the option for trainees or students of vocational courses to acquire qualifications for university access alongside their vocational qualifications. This is based on varying degrees of combination or integration of general and vocational education. It is connected with efforts to achieve parity of esteem between vocational and general education, and between work-based and knowledge-based learning.

The resulting qualification opens up alternative routes into professional work and advanced studies. While "double qualification / Doppelqualifikation" is a common term for this in a number of countries, including Austria, Germany and the Netherlands, the term "integrated qualification" was used in the proposal for this project because of its emphasis on the qualitative aspect of integrating general and vocational education. In the course of joint discussion in the partnership, however, a new term was created: "qualification with a dual orientation towards employment and higher education", with the abbreviated form **DUAL QUALIFICATION** (not to be mixed up with the "dual" system of vocational education and training in Germany!). This concentrates attention on the function rather than on the structure of the qualification, while the issue of integration is examined in the analysis.

The project focuses on an in-depth analysis of a selection of recent schemes of dual qualification which have been implemented in seven countries of the EU and EFTA (Austria, France, Germany, England, the Netherlands, Norway and Sweden). It includes three major aspects of investigation:

- the functioning of dual qualifications in the context of the education system and the social and economic framework of the countries;
- the educational issues implied in the schemes of dual qualification, particularly in relation to the learning process, the validation of competencies and individual guidance;

- the transfer of the qualitative innovation achieved in these schemes to mainstream vocational education and across national systems.



The project is designed so as to provide descriptive and analytical knowledge for understanding the different as well as the shared features of dual qualifications; to present essential characteristics of these schemes as scene-setting for future educational policies; and to offer action-oriented knowledge that will foster the process of transferring experience acquired in these schemes. A close dialogue with policy makers and actors and collaboration with LEONARDO pilot projects will be essential in this respect. The products of the partnership work will include

- a survey of the essential qualitative aspects of innovation achieved in the national schemes of dual qualification;
- a detailed presentation of the features of dual qualification which can be transferred between national systems and which are particularly important for future vocational policies;
- recommendations for promoting dual qualifications in transnational pilot projects under LEONARDO.

2.2 RESULTS OF ANALYSIS IN THE FIRST PHASE OF THE PROJECT

The schemes of dual qualification are characterised by features including the following:

A DIMENSION OF THE SCHEMES WITHIN THE EDUCATION SYSTEMS. According to this criterion three groups may be distinguished:

1. Schemes which extend over an integral part of the whole educational sector such as the vocational programmes or streams within the comprehensive school systems of Norway and Sweden;

2. Schemes which refer to individual courses or qualifications, e.g. the Vocational Baccalauréat (Bac Pro) in France, the General National Vocational Qualification (GNVQ) in England, the long courses of senior secondary vocational education (MBO) in the Netherlands and the WIFI Academy courses in Austria;

3. Schemes representing pilot projects within the established systems of vocational education and training (Germany: Bavaria and Brandenburg).

B THE BALANCE OF DUAL ORIENTATION. While all schemes allow for a dual orientation, they differ in the relative weight attributed to either employment or higher education. Several of them put the emphasis on employment as the prior aim (the schemes in Austria, France, the Netherlands and Sweden). This is likely to apply to the vocational streams in Norway as well, although the Reform 94 aims at a balance of the two orientations for the total provision of upper secondary education. The two remaining schemes (in England and Germany) imply a fairly equal weighting of the two progression routes.

C THE LEVEL OF VOCATIONAL TRAINING / THE TARGET GROUPS. Most of the schemes (in England, Germany, the Netherlands, Norway and Sweden) are part of the initial vocational training which is provided at upper secondary level for 16-19 year olds. The English, Norwegian and Swedish schemes are also open to adult students. The French scheme is specific in offering advanced education and training for students who have already completed initial vocational courses or certain stages of them. In Austria, the scheme is exclusively geared to adults who are already qualified in a vocational area.

The development of individual schemes is determined by several common factors, which range from the economic to the technological, social and educational. Among them, a special emphasis on factors related to educational aims can be observed:

- AUSTRIA and GERMANY. New schemes have been introduced which are designed to overcome the gap between general and vocational education, and in particular to raise the attractiveness of initial vocational education for high-level achievers (Germany) and to create vertical pathways within further education (Austria).
- ENGLAND. The ongoing reform of education has aimed at creating a coherent national qualifications framework with three different pathways: general, vocational and a middle one with dual orientation (GNVQ).
- FRANCE. Starting out from the need for higher qualification standards, the intention has been to bring the majority of young people up to baccalauréat level and, by creating the vocational baccalauréat (Bac Pro), to also meet the demand for a new category of industrial technicians.
- THE NETHERLANDS. The increasing educational demands of young people, especially for a double qualification already in operation (MBO), has put the question of further developing its dual orientation on the agenda.
- NORWAY and SWEDEN. National reforms were initiated to reorganise the education system, particularly at upper secondary level, in such a way that it would be able to meet the demands of both the individual and society for lifelong learning and would enable everybody to obtain qualifications for employment as well as for access to higher education.

Several aspects of the structure, contents and didactics are relevant for the schemes of dual qualification:

A FLEXIBILITY IN CURRICULUM DESIGN. Flexible structures of the curriculum, with a frequent use of modular patterns, have been introduced in the schemes of several countries. They are above all intended to connect and in part integrate general and vocational subjects or units of learning.

B EMPHASIS ON DEVELOPING PERSONAL COMPETENCE. Several concepts and terms used in the various national schemes centre on a new approach to learning which aims at developing personal competence in a complex and active way and which goes well beyond the division into general and vocational abilities.

C **COLLABORATIVE WORK OF TEACHERS**. The integration of academic and vocational qualifications calls for a closer cooperation between general subject teachers and vocational teachers. These two categories of teacher represent different backgrounds and traditions, so that the functional integration of teaching is difficult to operate. In addition, the teacher in an active learning environment takes over a new function as adviser rather than instructor and has to cope with independent-minded students who have a say in their own learning process.

D **COOPERATION BETWEEN SCHOOLS AND ENTERPRISES**. Most of the schemes link school-based and work-based learning, including mandatory practical assignments (France, the Netherlands, Sweden), supplementary ones (England) or traineeships (Norway, Germany). This approach implies a need for functional co-operation between schools and enterprises, and between teachers and trainers or workers.

There are several indicators which reveal the impact of the schemes, for instance the range of candidates entering a scheme, the rate of success within a scheme, the use made of the dual orientation as pathways, the skill level achieved in subsequent employment and the success rate in higher education studies. The actual scope of schemes to be included in this assessment, however, is limited in that most of the schemes are still in their introductory or pilot phase. Altogether, the analysis suggests that the schemes considered will require a careful and ongoing process of implementation and revision in order to fulfil their dual role effectively.

A key question which has accompanied the whole investigation is the extent to which vocational and general education are or can be integrated. The comparative analysis takes account of two dimensions which are assumed to be relevant for the qualifications with dual orientation: (I) the relationship of education and training to skilled work and (II) the relationship of general education to vocational training.

The curricula of the schemes provide for a variety of combinations involving vocational and general education, ranging from the additive to the integrative type of approach:

A Separate general/theoretical subjects;

B Vocational application of general/theoretical subjects;

C Education and training related to transferable skills;

D Action-orientated education and training (projects).

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The conclusions drawn from the comparison include the following points:

- There is, altogether, an emphasis on the additive combination of vocational and general education (A), with the latter being extended particularly in individual options. Three schemes focus on this (Sweden, the Netherlands, Norway), and most of the others include it as a vital part. The relevance of the additive combination seems to be fairly independent of the scheme's relationship to skilled work.
- Next to this, the vocational application of general subjects as the first stage of integration (B) is relevant, both as a focus (England, Germany: Bavaria) and in combination with other stages of integration (Austria, France). The relevance of applied subjects can be observed in schemes with differing relations to skilled work.
- The advanced stages of integration - training related to transferable skills (C) and action-orientated education and training (D) - are characteristic of two schemes (Austria, Germany: Brandenburg) which have, at the same time, the strongest relation to skilled work. These schemes display the potential of work-based education and training for the development of transferable skills, including study skills. Advanced forms of integration, particularly project work, are also represented as components of all the other schemes.

The first phase of investigation resulted in the following HYPOTHETICAL CONCLUSIONS:

The evidence implies that the various ways of combining general and vocational education are fairly independent of categories of courses or easily adaptable to the different options. This could suggest that there is considerable opportunity for the exchange and transfer of experience across schemes and national systems.

It is also apparent that the schemes of dual qualification apply to and indeed create both innovative course structures or curricula and the varying didactic approaches, all of which are of significance for the qualitative advance of vocational education and training.

2.3 OBJECTIVES OF THE SECOND PHASE

The aim of the second phase is twofold:

- to penetrate deeper into the characeristics and potentials of dual qualification and
- to draw national conclusions, in particular lessons of mutual learning.

The more detailed analysis focuses on selected issues of dual qualifications. The following TOPICS are selected for carrying out collaborative investigations of the schemes across groups of countries:

- **Integrative learning processes**

(Germany/Brandenburg, Norway, Sweden)

This study focuses on the question: What conditions and methods promote integrated learning processes generating dual qualifications? At the classroom or workshop level the partners look into how teachers organise the learning conditions, both between and within subjects. One important learning approach expected to generate integrated competencies centres on task-, problem- and project-based methods.

Research methods applied include observation, interviews, questionnaires and matching different models of organisation and tuition.

- **Synoptic assessment**

(England; France, Norway)

Synoptic assessment is devoted to testing candidates' accumulated understanding of a subject (the vocational area) as a whole. This study is related mainly to GNVQ in England, although experience and views from the other two countries are also offered for discussion. The issue is of active policy interest, since the intention is to introduce an element of synoptic assessment into GNVQ in the future.

- **Skills for higher education**

(England, the Netherlands)

The researchers draw their findings from their own investigations together with secondary analysis of research on the knowledge, skills and personal qualities required for success in higher education. The concern is how to increase prospects of progression to higher education while also maintaining an orientation towards the labour market as a fundamental aspect of a qualification with a dual orientation.

- **Tracing career developments**

(Austria, France, Germany/Bavaria)

One focal point of this investigation will be to assess the percentage of graduates entering industry-related jobs as against those choosing to pursue university studies. The evaluation will draw on results stemming from research data compiled in the states in question, including individual personal data and evaluations following completion of dual-qualifying education, and data on the educational measures involved.

The evidence of the four topic studies is presented in the first part of the report (chapters 3 to 6).

In the second part, each partner sets out national conclusions (chapters 7 to 13) which are based on the comparative investigation of dual qualifications in this project. The conclusions not only refer to the joint analysis of selected issues (chapters 3 to 6 of this volume), but also to the broader investigation of the national schemes (INTEQUAL Report I - see Appendix B).

The conclusions have a double purpose:

- providing a basis for dissemination of results in the partners' own countries and across Europe; for this reason they are produced in both the national language and in English;
- serving as a source for specific lessons to be drawn from the comparative analysis across the whole partnership.

Finally, the major lessons drawn by each partner on the schemes of dual qualification are compiled in a comparative survey (chapter 14). This is an attempt to present immediate evidence of mutual learning within a partnership of national experts. In fact the survey provides an empirical backing for the hypothetical conclusions put forward after the first phase of the project.

The lessons identified by this partnership are to be taken up in national and transnational conferences for detailed discussion with policy makers, practitioners and researchers in education.

Chapter 3

INTEGRATED LEARNING PROCESSES

GERMANY, NORWAY AND SWEDEN

Göran Arman, Tor Bergli, Rainer Bremer, Egil Frøyland *(Editor)*, **Gerald Heidegger, Robert Höghielm, Lillian Larsen & Owe Liljefelt**

3.1 INTRODUCTION

This chapter reports findings from a topic study of 'integrated learning processes' involving reforms and innovative schemes in Germany, Norway and Sweden. In phase I of the INTEQUAL project two main strategies were identified for integrating learning processes in order to develop dual qualifications to facilitate progression into skilled employment and higher education, and for achieving 'parity of esteem' of general and vocational education:

1) Integrating general and vocational education within a comprehensive upper secondary school system - facilitating access to dual qualifications (Norway/Sweden)
2) Organising integrated learning through provision of 'learning and work tasks' ("Schwarze Pumpe" pilot project, Brandenburg/Bremen)

In phase II four questions guided the investigations and discussions:

1) What is understood by 'parity of esteem' and 'integrated learning processes'?
2) What organisational or curricular frames facilitate or obstruct organisation of integrated learning processes?
3) What methods are conducive for promoting integrated learning processes – and how have the learning processes and outcomes been evaluated?
4) What reflections and suggestions can be made from the studies regarding national policy-making and future innovative programmes - and for continued international networking and cooperation in this field?

3.2 INTEGRATED LEARNING PROCESSES DUAL QUALIFICATIONS

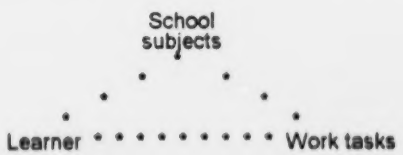
Modes and meanings of "integration"

For our analysis we distinguished between three main levels which feature distinctive forms of integration of general and vocational education and training (VET).

Level	Issue	Aim - Outcome
VET system (Society)	Integration of voc. and general education Comprehensive sec. ed. system	Double qualifications Social integration
Curriculum (Ed. inst.)	Integration of subjects Project work - suspended timetables Learning- and work task oriented schemes	Educational qualifications
Learning (Individual)	Integrated learning processes Individual learning programmes	Empowerment Identity

As this simple classification indicates integration is sought at many levels and the term signifies various phenomena. In the context of this topic study the following definition has been adopted (Miller 1991): 'Integration means literally the bringing together of parts to make a coherent whole which functions as one'. As indicated by the triangle below there are three key elements to be integrated.

Fig 1 The learner - subject - work triangle



It is the task of the teachers and instructors to mediate learning processes which facilitate amalgamation of practical and theoretical knowledge making the knowledge coherent and functional. Conventionally, the triangle has been approached from different points of view:

1) *School/subject.* Focus on substantive knowledge, i.e. discipline based, general knowledge. Integration of theory and practice primarily understood as application of theories to practical problems. Didactic teaching has been dominant.
2) *Enterprise/work task.* Focus on experiential, inductive learning through working on real life tasks. Task oriented tutoring of trainees.
3) *Learner.* Focus on personal development and individual differences or learning styles.

The teachers and instructors have to accommodate these elements in different learning arenas considering the crucial question: What conditions promote or obstruct shaping a functional, coherent, experiential knowledge base to underpin skilled and responsible actions?

There exist curricular, organisational and cultural barriers to integration of vocational and general education which are important to acknowledge and identify.

Table 1 Map of differences between general and vocational education

Categories	General/academic education Knowledge - schools	Vocational education Work tasks - apprenticeship
Overarching objective	liberate individuals from a pattern of thinking dominated by the here and now	train/educate competent skilled people and enlightened citizens
Orientation	theoretical, non-contextual	practical, contextual and situational
Knowledge	discipline-based, prescribed subject matter (canon of knowledge)	task-required, generic knowledge and skills
Curriculum framework	prescribed (national) subject-based curricula/syllabuses, guidelines	descriptions of work tasks, manuals, textbooks
Organisational framework	classrooms, week timetables: one subject teacher/one (permanent) class	workshops - in schools/enterprises, flexible workgroups
Pedagogics, teaching methods	Didactic teaching: mediation of (prescribed) subject matter, ac. canon of knowledge	work-life experienced teachers/ instructors are managers/tutors
Assessment, Examinations, Certifications	continuous feedback from teachers, national and local subject exams matriculation exam paper	continuous feedback to performance, evidence of portfolios, certification: trade test etc.
Culture and traditions	long-standing traditions essential for transfer of cultural heritage - safeguarded by well established professional groups	traditions persistently challenged by technological innovations and market demands

The classification may serve as an analytical tool for identifying, analysing and discussing aspects which obstruct or facilitate innovative schemes for integrated learning processes. In the Scandinavian countries the context is national, curricular reforms of upper secondary schools. The initial vocational training is organised within

comprehensive schools in which cooperation between and integration of the two cultures represent formidable challenges.

The German case is a pilot scheme 'Schwarze Pumpe' based on five assumptions or hypotheses referring to: 1) Changing culture of working life/industrial work, 2) Modernisation of VET system, 3) Integration of vocational and general education, 4) Enrichment of vocational learning and 5) Integration of work and technology.

The third hypothesis implies that integration of general and vocational education is not sought through "enrichment" of vocational education through the provision of more general education. On the contrary the objectives or ideals of general education are sought in and through the vocational learning process itself. The fourth hypothesis implies that improvement requires a central, didactic principle for the integration of numerous competencies (relating to the subject, methods, learning and social skills) through real work tasks/processes.

The 'Schwarze Pumpe' pilot project leads to dual qualifications, i.e. oriented towards skilled employment and providing access to higher education. The distinctive feature of this training programme is the introduction and use of "Learning and work tasks" (LWT). The training is organised both in an enterprise and at the secondary vocational school (Fachoberschule). Through the LWTs the two learning arenas can supplement and enrich each other in the work task. A key curricular idea is that general knowledge and skills can be generated from solving the assignments given. For this reason it is important to identify rather open-ended tasks with no set routes to follow, thus providing opportunities for exemplary, integrated learning.

The aim of the scheme is to promote or shape the trainee's capacity for competent and self-determined action. The concepts in the didactic thinking are signified by the German terms 'Gestaltung' and 'Mündigkeit'; neither of which are easily translated to English. "Gestaltung" refers to the *process of shaping* and 'Mündigkeit' to moral authority or self-actualization. Gestaltung is conceived as a dialectic process between freedom and predetermination, between planned and ad-hoc/situated actions, between conscious and spontaneous actions in which plans, emotions and creativity are involved. Human activity is moulded by reason and emotions and guided by values. In this dialectic paradigm the

duality of reason and emotion is transcended. The difficulties of translating Gestaltung exemplify the linguistic and cultural barriers to mutual understanding in comparative studies.

Approach and methods

Comparative and collaborative studies represent a relatively new field of research that capitalises on a wide range of disciplines, theories and research practices. For an international team it is important both to describe, analyse and assess selected phenomena and to identify and discuss the conceptual tools for doing so. Basically, this is a curriculum investigation trying to compare and contrast selected reforms or schemes for integrating vocational and general education in various countries. Ivor Goodson (1994) has made a *note of caution* regarding curriculum studies:

> One of the perennial problems of studying curriculum is that it is a multifaceted concept, constructed, negotiated and renegotiated at a variety of levels and in a variety of arenas. This elusiveness has no doubt contributed to the rise of theoretical and overarching perspectives and discourses in educational study, particularly the organisational and psychological, as well as more technical or scientific perspectives and discourses. These approaches have been criticised recurrently because they do violence to the practical essentials of curriculum as conceived of and realised. Hence, we need to move firmly and sharply away from these decontextualized modes of analysis; away from technical, rational or scientific management models - away from unproblematic belief in the "objectives game".

Goodson has expressed particular concern regarding the primacy, and the danger, of the ideology of curriculum as prescription and the 'mystique that expertise and control reside within central governments'. The two worlds of 'prescriptive rhetoric' and 'schooling as practice' can co-exist, unless somebody exposes the mystique. Consequently, it is essential that a study of integrated learning processes moves beyond prescribed changes and explores the innovative practices and their contexts. Through such explorations one 'could improve our understanding of the politics of curriculum and in doing so would provide valuable 'cognitive maps'... which would be most valuable "at times when state and bureaucratic prescriptions are becoming more and more invasive" (Goodson 1994). Curriculum research involves ideological and methodological issues which must be appreciated. International research projects provide inspiration and arenas for doing so.

Heidegger (1997) has put forward the following methodological criteria for conducting these type of case studies:

- Practicability, i.e. evaluation under normal, everyday conditions
  (In comparative studies use of the criterion for reliability is not productive)
- Acceptability, i.e. people involved should find the documentation and analysis useful
- Credibility, i.e. trustworthy (checkable) documentation
- Comparability, i.e. focus on issues and phenomena which are relatable
- Transferability, i.e. how to transfer the results and use them in innovative schemes

These criteria suggest a soft approach to scientific methods acknowledging the uniqueness of the historical, cultural, political, educational context of cases. Universal features of the cases are investigated, but no attempts are made to formulate generalisations.

The Leonardo project has been an exercise in how to exchange mental maps and national case studies for mutual enrichment. Through the cooperation several requirements have been acknowledged as important for productive research collaboration:

- Interest in international research cooperation
- Share the values (ideology) on which the research is based
- Commitment to (and involvement in) the research programme
- Common understanding of research theme, approaches, methods on which to report
- Adequate time and resources for fostering the collaborative research process
- Synergetic effect between national/local research project
- Flexibility in conducting the investigations - including changing deadlines

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It is important in the preparatory phase of collaborative research to spend the time needed to make sure that there is a common understanding of the principles and practical frames for the cooperation.

3.3 IDENTIFICATION AND ANALYSIS OF KEY NATIONAL ISSUES

The issue of integration of general and vocational education is deeply embedded in national cultures and educational systems. Subsequently, there is a need to explore and identify the distinctive national features before making comparative analysis, assessments and suggestions. This chapter presents key issues in Norway, Sweden and the German project.

3.3.1 Norway

Context and ultimate aim of Norwegian education

Norway is a Scandinavian welfare state with probably one of the most unitary school system in the world where private schools are almost non-existent. Almost all children and youth attend the nearest public school. The nineties have been an intensive reform period for the education system involving legal, structural and pedagogical changes at all levels. The most pervasive changes have taken place in upper secondary education. For all but higher education a 'core curriculum' has been introduced presenting the schools and society at large with a set of fundamental aims and values for education. 'The integrated human being' has become the new epitome for Norwegian education rhetoric. The final words in the Core Curriculum are: 'The ultimate aim of education is to inspire individuals to realise their potential in ways that serve the common good; to nurture humanness in a society in development'. The ultimate aim is of such a general nature that it is valid for all upbringing and life long learning - irrespective of learning arenas and career plans for employment or higher education. The ultimate aim mandates all teachers to cultivate the same fundamental human qualities. This has implications for and gives direction to the integration of vocational and general education too.

Organisational and curricular frameworks

As reported in the national case study (Frøyland, Bergli and Larsen 1996) the comprehensive reform of upper secondary education - Reform 94 - has as an overarching aim to overcome the traditional divide between general and vocational education. A series of structural measures were introduced to this end:

- Equity by granting all youth a statutory right to 3 years of education both in vocational and general streams.
- Combination of school-based and work-based vocational training by accepting two years of apprenticeship training equivalent to one year of school-based training. Main model for vocational education: 2 years in school + 2 years in apprenticeships which count as one year of full time school education and public resources are allocated accordingly.
- 'Generalising' vocational education by increasing the number of general subjects to 15 week periods (45 min) in the 2 school years: Norwegian (4), English (4), Civics (2), Natural Science (2) and Mathematics (3).
- Redefinition of academic qualifications by reducing the minimum matriculation requirement
- Curriculum provisions for acquiring double qualifications by offering vocational students supplementary courses in general subjects
- Despecialization of vocational foundation courses by reducing the number of specialisations from more than a hundred to ten.

Summing up: Reform 94 introduces statutory rights, structural and curriculum changes which are characterised by a greater *unification* of upper secondary education, in particular through strengthening the provision of general subjects in vocational education.

Pedagogics of integrated learning processes

The preceding paragraphs refer to policy-making at a systemic level. What guidelines and measures have been taken to promote integration of vocational and general subjects in practice? The Norwegian Ministry of Research, Education and Church Affairs has offered guidelines and implemented relevant measures in this respect:

- Making a 'Core curriculum' a common platform for all education
- Introducing 'learning by objectives'
- Presenting a 'Guide' for students' and trainees' 'self-reliant learning'

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- Introducing a 'Portfolio of evidence' for systematic recording of working and learning activities
- Making some 'project work' mandatory
- Reforming mode of examinations
- Strengthening 'school assessment'
- Broadening competence of teachers involved in the reform by extensive in-service training
- Introducing a major reform of teacher training for upper secondary schools
- Require pedagogical competence of teachers in enterprises offering apprenticeships

These efforts are all relevant for refocusing on learning processes and what has been signified as 'an extended concept of knowledge'.

In the remaining section of this Norwegian presentation, attention will be drawn to exemplary practices which illustrate attempts at promoting integrated learning processes.

Integration of general and vocational subjects

Many students in vocational streams have poor motivation for general subjects. In order to overcome these problems teachers are advised to contextualise the general subjects to the vocational specialisation. Many teachers have demonstrated creativity in this respect.

In one class of cosmetology in which many girls were phobic of mathematics, the girls acquired computational skills through work tasks involving weighting of ingredients, calculating costs and quantity needed etc. The point being that it is much more motivating and less conceptual demanding to calculate quantities with which one is familiar.

Mandatory project work

Reform 94 has introduced one mandatory project per year. For one or two weeks the ordinary subject-based timetable suspended. Students and teachers have "open time and space" for organising project work.

Designing and building a bathroom is a popular project in Foundation course of Technical Building Trades. The students have to prepare designs, calculate insulation, specify quantities of material, painting etc., estimate cost, prepare instructions for work to be done, do the technical work and produce a final report on work performed. Within such a project the general subjects are integrated in the technical work and the general subject teachers are available for advice and support when called upon.

In depth-study of project work at three schools

The objective of the field studies was to identify factors which further "holistic learning" and "action competence" through participant observations, interviews, questionnaires, students' logs and project work products with particular attention to methods for facilitating integrated learning processes. Three schools were selected for investigation. Here project work at school A will be presented. The findings from this school were corroborated by the studies at the other schools.

In school A two foundation classes in Art, Craft and Design were followed in two project work periods (Autumn and Spring). In the Autumn the classes had a multi-disciplinary project involving vocational and general subjects: Design, History of Art, Mathematics, Natural Science and Norwegian. The given, general topic was: The forest in art and environment. Mixed work-groups were organised and the groups chose themes according to their interest. Required product: Wall paper. The Spring project involved Design and History of Art and the given topic was: Local community and culture. In one class the students worked individually, and in the other one in work-groups. Required product: Information folder.
Requirements: use of information technology, classroom presentation, individual picture.
Aspects of evaluation: cooperation, effort/enthusiasm, planning, information management, product (wall paper/ folder and individual picture), classroom presentation.

Most students invested time and energy in the project work and in coping with cooperation problems. Comments by students illustrate their learning (Spring):

-cooperation and work delegation by discussions and agreements
-to take responsibility and work independently by working with problems and solutions
-to cooperate, share responsibility, work and find material by talking and making agreements
-to work independently, take responsibility, use scanner on PC, by working alone I had to take responsibility for everything which had to be done, included using the scanner for layout
-to feel more self-confident
-to maintain own views - and to listen

The students appeared more reflective about their own learning in the second project period. Nearly all students related to what may be called action competence and holistic

learning. In one occasion students referred to "fantasy, action, patience, cooperation, learn to learn etc." to such an extent that the teacher had to remind them of their learning of subject matter too. In the Autumn project students expressed pride in a good product (wall paper), their own creativity or solid subject knowledge. In May the students were asked what they had learned and made use of from the Autumn project. Ten students answered with comments like: "I learned nothing" "Nothing much I have used", but 2 of these "Had also learned to cooperate".

13 students demonstrated awareness about their own learning, to an extent they did not do in the Autumn, like:
-creativity, cooperation, group work, planning, layout, drawing, «about professional work» and "then I learned that wall paper as a medium of expression has its own way, needs "spice""

Many offered comparisons between the two projects, like:
-then I learned about wall papers, and now about folder
-now I learned to listen, we were not good to that in the Autumn project
-in the autumn project I learned to cooperate, now I learned to take responsibility for my own learning (worked individually)
-easier now to get a product, delegate tasks and start

Which factors further integrated learning in project work?

Motivation
Most students were motivated for project work. Some had "ifs», wishes and advises to the teachers. Some who were positive still felt problems of cooperation rather trying:
-all the quarrelling strained my nerves
-hard to get a result when we quarrelled all the time
But when they resolved conflicts, produced good results and were rewarded with good marks, group members experienced great satisfaction.

Fun
Most students found project work enjoyable, even most of those who had used "nothing" from the first project, gave statements like:
-fun, demanding on collaboration and planning - but satisfying

Reflective awareness
Reflective awareness depends on many factors, like student's ability to "learn how to learn", teacher's goals, tutoring and evaluation processes, student's self reliance and identity - and the room for self-actualisation and feeling of security. Goals, values and learning processes are important aspects upon which to reflect.

In charge of own learning

Observations and students oral and written responses showed that students attached great importance to a theme we may identify as "in charge of own learning". Nearly all students commented on that theme in one way or another (see also above). We meet the same theme in many students comments and their "advice to the teachers":

-important that students and teachers cooperate about the theme, groups and results
-freedom to influence the choice of theme and problem to study
-trust and collaboration student - teacher
-freedom to experience by trying and doing is important

Feeling secure

To experience that they are "in charge", and to master challenges and frustrations that normally will come, many students need the safety of available and supporting tutors, both for task-matters and to help resolve social processes/conflicts. To what extent they need it depends on the resources of the individual students, the group processes and the challenges in the task - and the dynamic between these factors. The students did not express this need as directly as they expressed the need to feel "in charge". Observation showed that some students more often felt stressed, insecure and frustrated - "felt not in charge" and needed support. Students comments and advises to the teachers expressed feelings like:

-positive that teachers have been available and given good tuition when needed
-it is important that teachers are available
-I felt I had not enough tuition
-teachers must cooperate, work with students , and not change the rules

Availability, support, good planning, teacher cooperation, secure frames (time, product etc./no changes during project period) were important for the students feeling "in charge".

A particular project in school C deserves special mention. This school held an "activity day" and the students chose to organise a traditional 17th May Celebration with pre-school children from a nearby pre-school as guests. The Norwegian National Day is first and foremost dominated by children's activities. All (4) classes in the Foundation Course of Health, Care and Society were involved in this real life task preparing: commemoration speech (by the principal), parades with music (brass) and songs, flags and "Hurrah", nice costumes, children's' party food and games with prizes to participants.

Summing up, project work as a method for integrated learning processes has shown many promising aspects. It is a challenge to teachers and teacher trainers to develop exemplary project methods based on or oriented towards real work tasks. This will have

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implications for the role of teachers. They must become more tutors for students and team collaboration among teachers will be crucial. Most teachers in this study acknowledged the need for change in this direction, but perceived many hindrances to such change. One obstacle is a rigid school organisation. More open structures and a more unified culture are required.

Assessment

Systems and procedures for assessment and evaluation have influential repercussions on the manner in which teaching and learning are organised. What is assessed is reckoned as important. Consequently, one may argue that students' progress regarding important educational aims should be assessed and reported. In the initial phase of Reform 94 the Norwegian Ministry of Education followed up the overall objective of fostering 'integrated human beings' by issuing general statements to the effect that personal qualities should be reflected in the marks given. The Ministry retracted on this issue after strong criticism from teachers who felt the guidelines were inoperable and that student lip-service would be unavoidable.

The Norwegian National Examination Board has introduced new assessment procedures in order to broaden the themes to be covered, giving access to manuals, notes etc., and allowing one day or more for preparation with topical suggestions. Central guidelines are provided for local or regional preparation of the examinations. The local examination texts are compiled and samples published. The idea is that the new mode of examination shall be an integral part of the learning process.

Examinations in the vocational subjects try to integrate practical skills and theoretical knowledge. An example may be informative: in a Foundation course in Arts, Crafts and Design the students were allowed three days, six hours a day, for 'preparation' of the topic: Modes or language of design in the nineties in contrast with the fifties. Design exhibits from the fifties are presented as telephone, radio, lamps, vases, jewellery hats, bags etc. The students are given three practical assignments related to drawing and designing in the design language of the decades given. The working process is recorded in a Logbook. The examination itself lasts for half an hour and is conducted orally and individually on the basis of work done during the 'preparation phase'. Criteria for

assessment include practical skills, aesthetic appreciation, creativity, capability to design, execute, appraise and present work plan and process etc.

The integrative and cross-curricular approach can be illustrated by consideration of an examination in a general subject:

Examination in Norwegian (language) for auto-mechanics

One day of preparation for which two assignments were given:

1 "The group or candidate shall visit either a motor-mechanic shop, a career counsellor or a vocational teacher in order to collect information about the motor-mechanic specialisation and its career prospects. Prepare questions and make notes and bring them with you to the examination next day."

2 "Read the excerpt from the novel "A small jubilee" by Kjell Hauge."

The excerpt vividly describes how a trailer-driver excitedly observes that the speedometer is approaching a mileage of 1,000,000 km. As the last digit turns zero, he smiles. The next sentence matter-of-factly informs how a rescue team found a totally wrecked trailer in which the speedometer was the only undestroyed part showing a mileage of exactly 1,000,000 km.

The next day the candidate had five hours to respond to three sections:

A) Reading comprehension.
The two first questions were: 1) What thoughts are in the mind of the driver? 2) How does the text reveal the driver's appreciation of his vehicle?

B) Written response to specific questions and
1) Write a message to a friend about a speedometer you have repaired on an old car you have supplied him.
2) Write composite nouns starting with given prefixes as exemplified in text.
3) On a photo of the dashboard the candidate shall indicate with arrows technical terms used in the excerpt from the novel.

C) Open-ended, written response to given themes:
The candidate shall respond to the first task and select one out of the next six tasks.
1) Write a brief report from your visit yesterday making use of the notes you made.

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2) This task is introduced by a brief text stating that 400 persons in Norway and 400,000 persons in the world are killed annually in traffic accidents - and that the best precaution for safer traffic will be to reduce car driving. The candidate shall "Write a newspaper article elaborating your opinion on what measures should be taken to reduce traffic accidents".
3) Imagine that you have been involved in a car accident. You are invited to a secondary school to tell about the accident and what it has meant for you.
Write your presentation.
4) Write a letter to a friend who is uncertain about what career to opt for and explain why you have chosen the motor-mechanic specialisation. Tell him also what you would like to do next year and explain the reasons for that.
5) Assume that you are the wife of the trailer driver. What thoughts do you have of your husband?

This examination exemplifies attempts to make this general subject a vehicle for conceptualisation and communication of the vocational specialisation. Fiction, poetry and reports are deliberately introduced in order to stimulate appreciation of literary genres and personal, cultural and societal aspects of relevant trade or vocation. The language training is both a medium to become an articulate specialist and an door-opener to literary treasures. This understanding and examination of a general subject makes the conventional distinction of general and vocational subjects misleading, if not outright meaningless.

Formative evaluation: "Portfolio of evidence"

Systematic recording and reflection on progression of work and learning are essential for enhancing the capability of self-reliant and productive learning. For this reason the Ministry of Education has introduced a "Portfolio of evidence" as an instrument: one for apprenticeship training and a simplified one for school-based education. The Portfolio is a personal document of the trainee or student and comprises the following sections:

1) background information about the trainee and enterprise, contractual information for the apprentice
2) a planning form specifying objectives and work tasks
3) performed tasks and
4) assessment of work and training

The Portfolio is filled in by the trainee or student, signed by them and their trainers and teachers. The document serves also as an instrument for quality assurance or development for the enterprise. The trainee will bring the Portfolio with her to the public certification test.

The Portfolio of evidence has not caused much criticism from apprenticeship enterprises. The Confederation of Norwegian Business and Industry (NHO) and the Norwegian Federation of Trade Unions (LO) have actively promoted the development of this instrument both as a pedagogical aid and as a first step in developing a system for documentation of working life competence. This is a crucial issue in a "recurrent education" reform report submitted to the Norwegian Ministry of Education in October 1997.

The need for formative assessment and quality assurance is essential in all education and should consequently be adopted for general education, is an argument that has been made by the NHO and LO. A shorter and simpler Portfolio of evidence booklet was introduced for general education after the Norwegian Parliament had endorsed the system. This caused an uproar from teachers. It would mean more paperwork for students and teachers alike to no avail for learning - and a step further in the bureaucratisation of schools and deprofessionalisation of teachers. The criticism lead to a new debate in the Parliament which ended with recommendation that the Portfolio should not be introduced for general tracks from 1997. But the teacher unions decided to boycott Portfolio of evidence also for vocational streams. On behalf of the Ministry of Education the Attorney General's Office, Civil Affairs filed a suit against the Teachers' Union of Norway for alleged breach of the collective work peace obligation. The Court ruled unanimously in favour of the Ministry of Education. The suit was filed by the Labour Government. By mid-October 1997 - after the election - three 'centre' parties have taken over the Government. Mr. Jon Lilletun, the new minister of Education, has signalled a more cooperative attitude to the Teachers' Union of Norway and a willingness to reconsider various aspects of Reform 94; the 'heavy theory load' in vocational streams has already been identified as a real problem.

It is worth noting, that representatives of student unions have forcefully defended the Portfolio of evidence as a means for the trainees and students to ensure quality in the

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development of their education and training. 'Portfolio of evidence' may become a test case for both legality and legitimacy of teachers and teacher union' autonomy. Much is at stake.

Changing VET cultures?

What emerges as the most crucial issues in realising the reform objectives regarding innovation of educational practices in the Norwegian Reform 94? What suggestions can be forwarded for future work? Some general comments and specific suggestions are warranted.

Crucial issues

1 To what extent is it possible to create a learning environment conducive for self-reliant learning within a school culture characterised by national curricula defined by subjects/modules and specific objectives? What potential has 'work- and learning tasks' for improving the quality of vocational education?

2 How to create collaboration between or unify different, partly contradictory, cultures of general and vocational teachers?

3 To what extent is it feasible for teachers to accommodate teaching to individual differences in undifferentiated classes? How to cope with passive, reproductive, proactive and oppositional students?

4 What has been the impact of the fast paced, top-down reform strategy for the school leaders' and teachers' professional roles - for their professionalism?

5 To what extent has the defensive strategy of teachers and unions reinforced schools as bureaucratic and inflexible organisations resistant to or incapable of change?
To what extent do the agreed regulations for defining teachers' workload constitute a barrier for developing innovative, flexible schemes - and consequently counter-productive in enhancing teachers professionalism and social status.

6 To what extent will the sequential model of two years school-based vocational training followed by two years apprenticeship training open up possibilities for more cooperation between schools and enterprises and more intertwining of working and learning?

Suggestions:

1) Identify and document "best practices" within the existing system.
Intensify efforts for developing schools as learning organisations through strengthening internal fora for professional cooperation and external networks for exchange of professional experiences. Competence building is needed and schools' systematic self-evaluation is required.

2) By invitation appoint pilot schools to experiment with new modes for integrated learning processes. The innovative schemes should have leeway from national standards and regulations.

3) Strengthen in-service teacher training regarding problem- and task-based learning, project work, teacher collaboration etc. Establish closer links between schools, enterprises and (vocational) teacher training colleges for mutual benefit regarding research and development work.

4) Continue the search for new modes and procedures for more synoptic assessment and for student process evaluation which will foster meta-learning and self-directed learning.

Conclusion:

There exists a gap between the ideal of fostering 'integrated human beings' and the organisational and curricular structure for realising this ideal in schools. In order to realise the ideals in educational practice more flexibility is needed. Overcoming rigidity calls both for revision of existing frameworks and established practices. Changing practice involves changing school culture and that requires time and many small steps. The innovative schools and schemes in Sweden and Germany may provide ideas and inspiration for policy-makers and practitioners.

3.3.2 Sweden

Background

Before the reform was launched, on trial in school year 92/93 and full scale in 95/96, it was preceded by a trial programme (ÖGY) with three year vocational education. Some of the teachers now working in the reformed school were engaged in the trial programme, and already developed there an interest in cooperation between the different categories

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of teachers. Those pioneers have been playing the role as mentors for the teachers later recruited in the reformed school.

In the Swedish study the researchers have undertaken interviews with representatives of the political parties, the Parliamentary Standing Committee on Education, the National Agency for Education and other strategic persons involved in the planning, implementation and evaluation programmes of the new reform. Furthermore the findings are based on observations of school organisations, learning activities and interviews with representatives of the school administration and academic and vocational teachers. There are no final evaluation data available since the first significant cohort of students participating in the reformed upper secondary education left their schools June 1997. Notably not a single one of the interviewees could refer to any foreign model either of successful or unsuccessful character, although some of the interviewees mentioned Germany in general terms.

Concept of integrated qualifications

When one is dealing with the concept of integrated qualifications the models of planning have been subject to changes at the three schools selected for field studies. A problem related to this description of the concept is that it is not used in the everyday work by teachers and we have been forced to use descriptions such as 'mixed subjects'. Integrated qualifications are aimed at giving the student both access to higher education and possibilities for gainful employment. The guiding metaphor in the governing documents is the concept of *Parity of Esteem*. In order to equip the students with integrated qualifications the schools must cope with both structural and subject content problems. Furthermore, the concept of integrated qualification can be explained in terms of different models of cooperation between academic and vocational teachers.

School organisation

It is hard to discuss, or even recommend, what kind of school organisation will best promote integrated qualifications explained in general terms. Since there are vast regional differences in industrial structures and the corresponding need for certain competencies, there should be ample freedom of movement how to shape the courses with integrated qualifications as a guideline. However, as evidenced in the case studies, the support from the school administration is essential for the success of the innovative

schemes. These schools have also been favoured by a previous trial period, according to our findings this has had a significant positive impact on the implementation of the reform.

Curriculum and syllabuses

The national curriculum for the new upper secondary education explicitly states that the goal oriented national curriculum shall be interpreted at the municipal level. Our three selected schools have all adjusted to this policy.

The general idea behind integrated qualifications has been expressed differently at the three schools. As mentioned above, the very idea of the concept of integrated qualification is not visible in the Swedish school debate and subsequently it is not reflected in the curriculum and syllabuses. Still, all schools have oriented themselves towards their own conceptualisation of how to mix academic and vocational subjects. The teachers clearly expressed their views on this topic stating it is necessary to create curricula and syllabuses in accordance with this idea. The administration level agreed and pointed to the efforts taken in this direction. Also, related to this topic is the question as to what should be expressed in the curriculum and syllabuses. That is, how explicit should documents be regarded as governing documents.

Classroom and workshop activities

One very important finding could be described as the creation of visible educational settings. Both students and teachers could clearly experience the difference in student participation and learning outcomes when the workshops were regarded as rooms for learning. The design of workshops, characterised by both vocational and academic teachers acting as tutors, and the availability of the learning material in the workshop promoted an active and self-confident student.

Above all, this design of workshops is important in the process of the integration of theory and practice. However, it should be stated that this is a tentative interpretation.

Teacher strategies

Integration of academic and vocational subjects contains several options and these were utilised at the selected schools. In some cases the teachers started by planning together

but still taught their own subjects individually. After an experimental period they began to integrate their subjects, c.f. 'workshop mathematics', but this is an informal way of planning studies. Many teachers said they reduced what they described as lecturing in front of large classes. Another additional strategy among teachers was to revise their teaching at the workshops, including review of all material. Since this teacher approach is more sensitive to the students' needs the disciplinary problems diminished.

An important element in the teaching strategy was the emphasis on writing reports on the PC and preparing for verbal communication. Again, as a result of integrated planning, this increased the ability of students to communicate with other students and teachers. Even at the workplace training this development could be observed.

When examining the teacher interviews it is quite clear that they have adopted a more holistic view when working in collaboration with each other.

A very common statement among teachers was that participation in these teacher strategies must be built on voluntarism. According to the involved teachers this is a relatively long process and it must be recognised as being required at all levels in schools.

Student development

As our findings indicate the impact on students' as learners was significant. Especially, the student's responsibility to be an active member was remarkably increased. This covers the individual student's possibility to choose when he or she wanted to take a specific part of a subject or task and at what time. Both students and teachers could also notice and verify a certain progress was made in the second and third years.

Further on teachers said that they could observe how the students were no longer afraid but became able to pose and solve problems. The students could thereby stretch their limits and, as were expressed by some teachers, they developed as human beings. One explanation could be that the students were appreciated as individuals. These findings indicate that this design of teaching, supports the important aim of the reform to promote self-confidence among students. Further on they could choose their classmates during

different activities. This could be interpreted that student participation has a positive impact on student development.

According to representatives for the planning and implementation of the reform, this way of approaching the students played an important role in the preparation of the reform.

3.3.3 The German/Brandenburg pilot scheme "Schwarze Pumpe"

German context. Models of integrative learning

Especially the German "dual system" is based on fixed schemes of vocational contents, so every vocation is described by a (rather high) number of qualifications to do something within the frame of a distinguished and designed vocation of which a standard is given to the students while they are learning. On the other hand general education is related to contents, too, but they are to be seen as "vehicles" for individually developing competencies. To come to integrated qualifications the gap between "learning by working" and "learning by theoretical understanding" must be bridged by integrated methods of the learning itself: the qualifications needed for work-processes have to become subject to theoretical understanding and both the scientific theories and the competencies of communication must be used in the work-process in which learning is organised. That for the curriculum consists of "integrated learn- and working tasks" (ILWT) which offer a wide demand of "open" solutions the students have to find even such which seem to be "off-standard" (as a result of individual "Gestaltung" [shaping]). The ILWT promote learning methods of self-directed learning.

Selected innovative schemes

From the application of methods of self-directed learning which are enforced by "open", both scientifically and vocationally described problems of working and learning raises a severe problem of research methods. The effects of learning something non-standardised cannot exactly be seen either in the results or in the behaviour of the student. So they have to be asked about their processes of learning and their work-experiences. This must be part of the evaluation. In advance the ILWT must be designed or analysed according to the extent to which they possess the potential for shaping and how realistic — related to the existing capabilities of the students — it could be to expect

the students to be able to find rational solutions. Afterwards not only the results but also the experiences both of the students and the teachers are subject to the research process. In addition by analysing the content of the students and teachers answers and comments on their reflections upon what has happened during learning and working, this will indicate some of the differences between conventional training and learning and the effects of the new methods which include a higher level of reflection because this is itself an important aim of "Bildung".

The evaluation approach is aiming to provide formative support to the model project. That the model project aims are gained is too important a task, to be left to a final analysis and normative evaluation. This requires integration of the evaluation instruments to the model project. This gives a legitimate doubt to the validity of the evaluation results, if it is done a way that participants sincerely confirm to each other that they have done the work. The formative evaluation can still work with objective standards, which are deduced from requirements of the model project. Such standards of evaluation have to be brought together with the requirements of pedagogical action in such a way, that they reinforce each other. This gives the evaluation questions the possibility to have a positive influence on the model project on the one hand. On the other hand this demands for that the instruments are able to deal with the task of providing an hermeneutic interpretation, according to the objective hermeneutic of Oevermann (1983),

From this roughly sketched understanding of the evaluation task it is apparent that the in-depth interview as a key research instrument presents itself. To show the methodological research differences between interviews and in-depth interviews in a simple way, in-depth interviews demand from the interviewer, that she/he not only checks the answers for clarity and unambiguity, but also in an ideal case she/he should be able to identify the content of latent opinions and attitudes, which underpin the subjective meaning of the individual answers.

The practical research demand for the application of qualitative methods is evident. Within our model project we set a practicable frame for the evaluation. This was done in such a way that the choice between breadth and depth was decided in favour of complete inquiry with the apprentices and a questioning of the full-time teaching staff of the model project. This makes it more plausible to describe the indent interviews as

structural interviews with a cluster of questions. The adjective structural should indicate, that the questions, asked in a non standardised way, can still generate structure in the answers. This structure in the answers should be of such a kind, that during interpretation they reveal a depth of opinions and attitudes and in-depth a superficial breath. Knowledge gained from sources other than the interviews is also used during interpretation. This differs considerably from the procedure of the objective hermeneutic described by Oevermann (1983).

Analysis of key issues

a) The aim of learning to obtain integrated qualifications is related both to the curriculum (given by the vocation/school administration itself) and the efforts of students and teachers/trainers. *What* they have to learn/to teach is prescribed, the way (*how)* to do this and by *which* means are the sort of decisions found by a social process to fix the range of individual possibilities of learning and creating conditions of learning by groups of pupils etc. Although students are not free in choosing their subjects, they are free to choose the organisational framework of learning and working: they are given the tasks and have to find the solutions within a defined time. They have to make use of those methods which are demanded by the task, including making use of knowledge beyond their immediate experiences so they work with textbooks, using the facilities of the enterprise/the school including computers, libraries, etc. (every ILWT has as it's last part a presentation of a mediasupported explication of the solution). Last but not least the teachers/trainers can be asked to help by providing information, probably offering a "classroom session" to give concentrated support if required. This changes the roles both of students and teachers/trainers. The latter have to spend more time in preparing the ILWT but less while the students are learning and working, as students are controlling the kind and amount of the demanded "input" teachers/trainers are asked to give.

However, a total change to the described forms of integrated learning processes could not yet be accomplished. A juridical fixed principle says, that only those things that have should be tested been taught. Only an integrated assessment based on the work done in both educational routes would give an acceptable basis for testing. That would give the apprentices the opportunity to prove their abilities, and show that they have gained by solving learning and working tasks. As long as these are considered not relevant for testing, the conflict stays, that forces teachers and students to a schizophrenic

interpretation of the results of the model project. You learn quite a lot, but nothing of relevance examination.

Testing is not only for the control of the learners, but also for the teachers. If the testing conditions are not extended by the specifications of the model project, learners as well as teachers have to stick to conventional measurements of success. There has to be a different strategy educators of success in the model project from .... conventionally used at work and in school. This strategy develops from conventionally determined successes and builds on the consent of apprentices, trainer and teacher, who are committed to going beyond thinking of success in terms of performance on standardised test questions.

However, there is a difference between the learning location of school and company. Test pressure commits the apprentices at both learning locations to strive for security, as they aiming to meet the test requirements. They want to be on the safe side, at school and in the company, in order to meet the test requirements. Referring to this background the apprentices prefer the company training rather than in school, and they see a clear difference between them. Astonishing though it is, the apprentices have to prepare themselves at the company for a mindless multiple-choice-test (PAL-test). While the FHR-test (FHR = Polytechnic entrance qualification) has a standardised format, is it done with suggested questions, which are chosen by their teachers and approved by supervisors of the school. This makes the FHR-test closer to the teaching than the PAL-test, which is flat-rate decreed by the IHK for a district. The teachers have more influence on the FHR-test, than the trainers on the IHK-test.
The repercussions of the test regulations on the structured teaching, structured by learning and working tasks, is astonishingly in inverse proportion to the freedom, that is given by the respective test of the learning location. The apprentices make the general statement, that they prefer learning at the company more than at the school. The company training probably compensates for the negative limiting effect of the test better than the school.

Regarding that, the answers of the teachers indicate the same. Teachers and apprentices seem to agree with each other, because both use the expression "healthy mixture" of "project" and "teacher centred" teaching. But behind that expression are

hiding different experiences and views. If you take into account, that the apprentices have got a need for and are interested in successful teaching, the answers still show differences to those of (some) teachers and trainers. The apprentices judge each single teaching, "project" or "teacher centred" intervention to be a success. Some of the teachers and trainers are sceptical. That means, if an apprentice sees "project teaching" as successful, his need for security is fulfilled, while the needs of teaching staff are necessarily met. They doubt, that such successes support performance in the final examination. Their talking of a "healthy mixture" truly means, that "teacher centred" teaching has got to play an important role to assure that the aims and the syllabus will be met. They still believe that only that kind of teaching can assure an assessable "success". The apprentices believe from their own experience that they can ascribe that type of success to "project work" as well.

The answers of the apprentices tend to a direction, indicating that they prefer the company learning location, and that their answers can be interpreted as showing that the apprentices favour successful projects rather than teacher centred teaching. Some teachers and trainers limit the success of learning and working tasks to a certain class of aims. In that sense "project work " can only be successful concerning "independence", "team and communication abilities", etc. The actual, mainly cognitive, aims of teaching still require teacher centred teaching. If all teachers and trainers would think that, it would lead to a reservation within the double qualification, for which the model project had been set up.

The interpretation of that, what a part of teaching staff means by a "healthy mixture", indicates the split of teaching aims that should be pursued together with to following attribution to the different approaches. You need "teacher centred" teaching for the qualification aims, "project" teaching for the key qualifications. There is no need to explain that this is entirely counterproductive. Such a "division of labour" between approaches destroys the educational standards of the one as well as the other teaching method. This is also indicated by ascribing that it is the job of the school to prepare for the FHR-testing and the company has to prepare for work. In that sense some learning and working tasks have been carried out, without integrative character. This is probably the reason that some apprentices had bad experiences with "action orientated lessons" (handlungsorientiertem Unterricht).

The occasional criteria of school projects seem to show a complementary relation between the reports of teachers and apprentices. On the one hand the apprentices are complaining about the chaos during work and that no one really knows what to do. On the other hand the teachers expected more independence, energy and ideas from the apprentices.

Here the evaluation is touching a central point of the model project. With many successful examples for learning and working tasks it is possible to say, that with today's status of the model project it is no problem to avoid, for future planning, the previously described misunderstandings. This results from the immanent prospect of development, but such development is not available to devise reasonable test regime. That means, the progress of the model project is able, from its logic, to clear up the described misunderstandings about construction and implementation of learning and working tasks. But it is not able to clear up the deeper problem of devising an acceptable assessment regime that supports an holistic approach to learning. To cause such a modification, lies not within the power of the persons involved in the model project, including those involved in the follow-up research (Wissenschaftliche Begleitung).

3.4 DISCUSSIONS AND SUGGESTIONS

In this final chapter we will address the four questions raised in the introduction.

What is understood by 'parity of esteem' and 'integrated learning processes'?
The Norwegian, German and Swedish reforms and schemes appear to have distinctively different approaches to the 'learner - subject - work triangle' referred to in the introduction of this topic study. A dominant feature of the Norwegian Reform 94 is the expansion of general *subjects* in the two years school-based vocational streams. The pedagogical challenge is how to integrated general and vocational subjects and how to motivate low achievers for more general subjects. The pathway to trade tests includes two years of apprenticeship training which is the responsibility of the enterprise but with comparatively generous public financial support. The Swedish reform has a more learner centred curricular structure. The students can opt for an 'individualised study programme' and almost 30% do so. The Scandinavian reforms have the more or less implicit assumption

that 'parity of esteem' of general and vocational streams are best catered for and strengthened in comprehensive schools and by 'generalising' vocational education.

The German innovative scheme is oriented towards real life work tasks which are conducive for acquiring professional and personal skills. 'Parity of esteem' for vocational education is sought through cultivating the educational qualities inherent in craftsmanship. From this point of departure one seeks to integrate and develop the general skills required for higher education. In the German pilot scheme one tries very deliberately to realise 'parity of esteem' by integrating vocational and general education by developing new curricula including new methods of teaching and learning. The innovative scheme is within the national vocational programme and the students sit for the same examinations.

What organisational or curricular frames facilitate or obstruct integrated learning processes?

The selected, innovative Swedish schools demonstrate how school leaders and teachers may create necessary organisational and curricular flexibility for integrating vocational and general subjects. In Norway curricular integration is mandated in project work periods. The subject-based timetables, the undifferentiated classes and ambitious aims in general subjects leave little leeway for individualised and self-directed study programmes. In this respect Norway should capitalise on programmes and experiences from Sweden.

The design, support and execution of the Norwegian 2 + 2 model for integrated school based and enterprise based vocational education have facilitated significant expansion of the apprenticeship system. The model and the cooperation between the social partners have considerable interest for other countries with declining recruitment of trainees and apprenticeship companies.

The German pilot project demonstrates that different ways of learning can only take effect if the examination tests are relevant for the new contents and methods. On the one hand all authorities have to agree to this and on the other hand teachers of general and vocational education need new, different qualifications, ie they need integrated qualifications too.

What methods and evaluation modes promote integrated learning processes?

Integration of learning implies overcoming the compartmentalised subject-based structure in schools and the traditional roles of teachers and students. As evidenced in the German pilot scheme it is essential to reconsider the confined nature of subject knowledge in which teachers and students alike expected well defined tasks with one approved solution. Their basic understanding of knowledge and learning changed through a social process in which they were given opportunities to experiment with new methods. Much emphasis was put on developing the students' own responsibility for 'shaping' the working- and learning processes- and their meta-cognitive conception of those processes. The research evaluation has been more preoccupied in supporting the developmental processes than on being a non-inter-ventionist scientific evaluation. The approach may be called 'action research at a distance'.

The examination mode is incongruous with basic principles in the German pilot scheme. The Norwegian Examination Board has introduced new modes of examinations which rely less on reproduction than upon 'production', i.e. demonstration of capability to solve tasks and justify chosen procedures and make a mature appraisal of work processes and product.

In Sweden Owe Liljefelt (1996) has made an empirical study on achievements on in-depth task based, oral tests and standard, formal examinations with respect to core competencies such as subject knowledge, problem-solving skills, personal attitude and aesthetic ability. The two modes of testing lead to different results indicating the importance of designing modes of assessment that provide opportunities for students to document "innovative and personal competence".

What reflections and suggestions can be made regarding national policy-making and international networking and cooperation?

National policy-making has to decide whether there should be prescribed curricula, i.e. a system of curricula guiding learning processes which ensures administrative control - or if there should be more responsibility granted to teachers, trainers and students. In view of new modes of industrial work and services the schoolish learning mode appears like an 'island' ruled by ineffective regulations. More autonomy and responsibility to teachers

and students for shaping the learning processes and their outcome, would bring the educational world (schools) closer to social life and the world of work.

The international partners in this first and small topic study on integrated learning processes, have experienced the mutual enrichment in comparing and contrasting different national schemes. This type of collaborative research on innovative schemes has several advantages: 1) The national schemes are discussed in the context of national traditions and culture which may shed new light on the cultural and systemic features obstructing or facilitating to change. 2) From researchers and schemes from other countries the national schemes may receive inspirations and inputs for further advancement of national reforms or schemes.

The project has created a forum for exchange of information on and discussions of national features of reforms and innovative schemes. A school visit to a an upper secondary school in Stockholm demonstrated the value added in meeting teachers and students in classes. In studying educational phenomena as 'integrated learning processes' it is utterly for international teams to have opportunities to observe educational practices and interview key actors. It is an asset or enrichment for international teams to have members with various disciplinary and professional backgrounds. In developing such teams one must acknowledge that time is needed for developing a common language or common frames of reference. It is a matter of 'integrated learning processes'.

How to disseminate 'lessons learned' and further the international networking started. The simplest task is to disseminate findings through reports and presentations on seminars and conferences. As important - if not more - is to involve the host institutions in follow-up research and development work which may contribute positively to the success of pilot projects and innovations in the topic domain.

ABREVIATIONS

FHR	Polytechnic entrance qualifications
ILWT	Integrated learning and working tasks
LO	Norwegian Federation of Trade Unions
NHO	Confederation of Norwegian Business and Industry
PAL-test	Multiple choice test

VET Vocational education and training
ØGY Översyn över gymnasial yrkesutbildning

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Chapter 4

POSSIBLE ROLE FOR SYNOPTIC ASSESSMENT WITHIN VOCATIONAL EDUCATION PATHWAYS

ENGLAND

Alan Brown

EXECUTIVE SUMMARY

Context

This chapter has been produced as a contribution to debates about the possible role of synoptic assessment within vocational education pathways oriented towards higher education and employment, following on from a broader comparative investigation of these pathways (Manning 1996). The report is based on a series of small-scale investigations and discussions on ideas for the review of assessment policy and practice for General National Vocational Qualifications (GNVQs). The objectives of this report are two-fold:

- to undertake a review of approaches to synoptic assessment, drawing upon relevant research evidence
- to examine issues addressing the form that synoptic assessment might take in General National Vocational Qualifications (GNVQs).

The report provides an academic underpinning to any subsequent policy discussions on synoptic assessment. It is therefore an area of active policy interest in England and a review of discussions about the role and form of synoptic assessment could be of wider interest and applicability, as several countries expressed interest in work in this area.

Summary of Part One: the review of approaches to synoptic assessment

A definition of synoptic assessment

Synoptic assessment can play a role as part of a strategy for teaching and learning and to fulfil the requirements of public accountability and credibility. In order to examine the case for synoptic assessment in vocational areas, then the definition should be broadly drawn:

> "synoptic assessment should test candidates' accumulated understanding of the domain as a whole and their abilities to integrate and apply their skills, knowledge and understanding in appropriate contexts".

Importance of integration and development of a substantive knowledge base

Synoptic assessment in unit-based systems can reinforce the need for integration and review of what has been learned from different units. It can also act as a deterrent to a 'surface' approach to learning and reduce the likelihood that someone can complete a unitised programme with a relatively impoverished knowledge base.

Criticisms of reliance upon discrete unit tests of knowledge and understanding

Four criticisms can be made of the implicit assumption, underpinning a series of individual unit tests, that knowledge is constructed by putting together a series of blocks of knowledge over time. First, it underplays the significance of how cognitive development is thought to occur: in particular, it does not allow for assessment of the mental models, schemas or networks that are a fundamental component of developing expertise. A unitised assessment process may favour compartmentalisation of knowledge and act as a disincentive for learners to integrate what they have learned in the separate units. The model of knowledge acquisition underpinning a series of individual unit tests is similarly impoverished. Replication of knowledge is tested, with little attempt to assess the ability to apply, interpret and associate knowledge, in a way which would be possible with synoptic assessment. Third, discrete unit tests do not encourage continuing processes of review and critical reflection. This is unfortunate as such processes are widely seen as

fundamental to further progression. Finally, discrete unit tests encourage tutors to compartmentalise knowledge in the different units, rather than helping students make links between what they are learning in different areas, through the creation of a framework that can help learners organise their learning in the domain as a whole.

Lessons from an earlier consultation on synoptic assessment in modular examinations

An earlier national consultation on synoptic assessment produced agreement on the need for coherence in modular schemes, but no agreement on how to achieve it, nor on what form any synoptic assessment might take (SEAC 1993). There are two approaches possible to try and bring about coherence and integration through assessment processes. One would be to design and assess synoptic units. The other would be to use the assessment processes to encourage students to integrate what they have learned. One argument voiced against the need for synoptic assessment for modular A levels was that it was not always required for traditional A levels.

Performance assessment component of synoptic assessment

Performance assessments could be used to try to elicit successful application (and possibly integration) of knowledge through investigations, project work or similar activities. Synoptic performance assessment would allow assessors to form judgements about holistic performance.

Value of using performance assessment and knowledge tests for synoptic purposes

One problem with relying exclusively on performance-based testing for synoptic assessment is that it can be very time-consuming. However, practically-oriented assessment supplemented by a synoptic knowledge test could be a feasible proposition.

Formative and summative functions of assessment

Synoptic assessment could serve formative and summative purposes. Synoptic assessment should provide learners with meaningful feedback, such that action can be taken to help students make the connections and inter-relationships that are viewed as important in the development of a synoptic understanding of the domain as a whole. The question of what is the most appropriate level of aggregation for summative (and/or *synoptic) assessment is influenced by pragmatic questions* of how the assessment information will be used for progression purposes in education, training or employment.

Summary of Part Two: form synoptic assessment might take in GNVQ

The nature of assessment in GNVQ

Criterion-referenced assessment systems do not offer comprehensive coverage of the understanding, skills and knowledge to be assessed. GVNQ unit tests could more accurately be described as content-standard tests: tests are composed of items representative of content.

The GNVQ portfolio serves important formative and summative assessment functions

The GNVQ portfolio serves important formative and summative assessment functions. It also has a synoptic function, in that the portfolio should reflect a student's accumulated understanding and ability to apply what he or she has learned. Any more explicit synoptic assessment should be capable of alignment with and support for the assessment functions currently played by the portfolio. Hence performance on a standard assignment, covering one or more units, could itself be integrated into the assessment evidence, which is considered when assigning grades to the quality of the portfolio.

Level of aggregation of the external tests

Aggregation for test purposes at the level of the unit is arbitrary, in that this could be at a higher level. It would be possible for synoptic assessment to take the form of a knowledge test covering a number of units.

Allowing the development of skills over time

Greater emphasis on synoptic assessment, with a less prominent role for unit tests, might be more supportive of a gradual build-up of skills over time and across units.

Synoptic assessment and standard assignments

A standard assignment, which was explicitly designed to be integrative, could be externally set, teacher assessed and externally moderated. This would allow for coverage of a greater range of activities and greater breadth of assessment evidence than traditional testing. This type of synoptic assessment would have a beneficial effect on teaching and learning processes, and could play an important formative assessment function, as well as addressing issues of comparability and public confidence in the assessment process. The assessment should take place at a time so as to allow 'lessons learned' from carrying out, and feedback on, the standard assignment to be incorporated within the portfolio. Performance and reflection on the standard assignment could then contribute to both aspects of the assessment of the portfolio.

Synoptic knowledge tests

Knowledge tests alone would be an insufficient basis for synoptic assessment. However, they could provide a useful complement to performance-based synoptic assessment through a standard assignment. Synoptic knowledge tests could test higher order reasoning skills and understanding across the domain as a whole. They could also be more open-ended, drawing on 'understandings' from the unit(s) as a whole, and making use of extended scenarios, if appropriate. Pre-testing of whole tests would be advisable.

Combination of standard assignments and knowledge tests for synoptic purposes

Such a combination would comprise internal and external assessment components and would allow students to demonstrate an overall grasp of the programme as a whole. This would facilitate use of feedback for teaching and learning, while also addressing issues of public credibility.

Context of proposed changes to GNVQ assessment procedures

Following on from major reviews of GNVQ and its assessment processes, the National Council for Vocational Qualifications (NCVQ) announced significant changes to the GNVQ assessment model (Brown 1996). In this context, synoptic assessment could play a role in helping address a number of current assessment concerns. Assignments, tests and the portfolio could all have synoptic dimensions and encourage achievement of higher order skills of analysis, synthesis, evaluation and the like, and provide evidence of a student's overall grasp of the subject area.

PART ONE: REVIEW OF APPROACHES TO SYNOPTIC ASSESSMENT

4.1 Introduction

Context

The English INTEQUAL national case study showed that the major problem with GNVQ[1] was that its assessment model was fundamentally flawed, and that action was required to overcome the problems caused by an atomistic assessment regime (Brown 1996). One aspect of a search for a solution involved a consideration of the possible role to be played by synoptic assessment. It is therefore an area of active policy interest and it may be that a review of discussions about the role and form of synoptic assessment are of wider interest and applicability, as some other European countries are developing an increasing interest in issues of assessment in secondary general or vocational education.

Towards a definition of synoptic assessment

Synoptic assessment has been defined as that "proportion of assessment devoted to testing the candidates' accumulated understanding of the subject as a whole" (SEAC 1993, p2). That definition was applied by the School Examinations and Assessment Council (SEAC) in a consultation on synoptic assessment in modular A/AS examinations[2]. The consultation itself was a response to concerns that students might study and pass individual modules over time, without necessarily being aware of the inter-relationships of what was learned in different modules and without an understanding of the subject as a whole.

Like other forms of assessment, synoptic assessment can be used as part of a strategy for teaching and learning and/or to fulfil requirements of public accountability and credibility (Black 1990). In the former sense, synoptic assessment needs to test important educational aims, such as the power to formulate explanations (Black 1990), when

[1] GNVQ was introduced in 1992 as a 'middle pathway' attempting to straddle academic and vocational traditions. Initially it was thought that around half the age cohort might take Advanced GNVQ, but current recruitment covers 17% of the age cohort and may stabilise at around 20% (Brown et al, 1997).

[2] General Certificate of Education (GCE) Advanced (A) level examinations are taken as the culmination of the academic pathway within secondary schools and colleges. The GCE Advanced Supplementary (AS) levels, which are each equivalent to half an A level, may be taken alongside A levels or GNVQ, although in practice they have not proved very popular (Brown, 1996).

faced with problems which could be drawn from across the subject field. The prospect of such assessment would be likely to have strong 'backwash' effects on teaching and learning, in that students and tutors would have to emphasise coherence and integration across the subject as a whole.

The pressure to satisfy the need for public credibility could take the form of an undifferentiated desire for terminal external examinations, as being appropriate for qualifications esteemed by the public. The lack of differentiation implicit in this view can be seen from the way that terminal examinations in discrete subject areas, while lacking any explicit synoptic assessment of the subject as a whole, may still meet the goal of public credibility.

It is important, therefore, to differentiate the case for synoptic assessment from a desire for familiar terminal examinations. With this in mind, it is also vital to recognise that there are dangers that synoptic assessment in a particular format could result in the privileging of certain forms of knowledge (Eckstein and Noah 1993). For example, if the synoptic assessment took the form of a single written examination, then the value of applied knowledge could be implicitly downgraded: the message would then be that what really matters is theory, principles and conceptual understanding (traditional 'academic' knowledge).

Synoptic assessment needs to be representative of the curriculum as a whole. There are dangers if a curriculum is applications or process-based, yet the key assessment is primarily knowledge-based. Any moves towards particular forms of synoptic assessment should therefore pay attention to the curricular impact. The effect on teaching and learning processes could therefore be seen as a form of consequential validity (Messick 1989); and it would be important that any proposals for synoptic assessment address this issue.

Hence if there is a need to examine the case for synoptic assessment in vocational areas, then first the definition of synoptic assessment must be more broadly drawn. The following may be more appropriate: synoptic assessment should test candidates' accumulated understanding of the domain as a whole and their abilities to integrate and apply their skills, knowledge and understanding in appropriate contexts.

4.2 Importance of integration and development of a substantive knowledge base

Integration

One advantage of modularisation or unitisation is that it breaks learning down into 'manageable chunks'. There is though an issue about whether it is appropriate, and if so at what stage, to integrate what has been learned. One strong theme from contributions to Hodkinson and Issitt (1995) was the need to recognise that while it may be valuable "to disaggregrate performance as a tool to aid learning and assessment, it is also vitally important to synthesise it as well" (Hodkinson 1995, p8). The message synoptic assessment can send is that integration, or at least a comprehensive review, of what has been learned from different units is desirable.

Possibility of passing a unitised programme with a relatively impoverished knowledge base

Many of those currently successful on unitised programmes (such as GNVQ) undoubtedly do build up such an integration, as it is one component of developing expertise in an occupational area. However, students with a 'surface' approach to learning may do enough to pass each unit test, and the programme as a whole, with a relatively impoverished knowledge base. This could have longer term consequences, as the build-up of a substantive knowledge base as part of domain-specific expertise is central to experts' problem-solving strategies (Chi et al 1988), and is also crucial for the development of expertise (Achtenhagen 1992) and as a basis for future learning (Dochy 1992).

Need to develop a substantive knowledge base

Synoptic assessment of developing skills, knowledge and understanding imposes additional learning demands over and above those required to pass individual unit tests. One way it does this is through drawing attention to the need to organise, access and use information for different purposes. This is a major advantage though in that that

ability is itself critical in distinguishing experts from novices (Eteläpelto 1992; Blagg et al 1993). Similarly supporting learners to develop a substantive knowledge base (Resnick 1987; Barrow 1991) helps equip them to develop future expertise.

4.3 Criticisms of reliance upon discrete unit tests of knowledge and understanding

Use of an inadequate model of cognitive development

A possible major problem with a series of individual unit tests designed to test knowledge and understanding is the implicit assumption that knowledge is constructed by putting together a series of blocks (or units) over time. Four criticisms can be made of this implicit assumption: these are briefly outlined below, but are given in greater detail in a previous project publication (Brown 1996). First, it underplays the significance of how cognitive development is thought to occur: in particular, it does not allow for assessment of the mental models, schemas or networks that are a fundamental component of developing expertise. A unitised assessment process may favour compartmentalisation of knowledge and act as a disincentive for learners to integrate what they have learned in the separate units.

The model of knowledge acquisition underpinning a series of individual unit tests is similarly impoverished. Replication of knowledge is tested, with little attempt to assess the ability to apply, interpret and associate knowledge, in a way which would be possible with synoptic assessment. Third, discrete unit tests do not encourage continuing processes of review and critical reflection. This is unfortunate as such processes are widely seen as fundamental to further progression. Finally, discrete unit tests encourage tutors to compartmentalise knowledge in the different units, rather than helping students make links between what they are learning in different areas, through the creation of a framework that can help learners organise their learning in the domain as a whole.

4.4 Lessons from an earlier consultation on synoptic assessment in modular examinations

Agreement on need for coherence, but no agreement on form of synoptic assessment

In the early 1990s, the national school examinations and assessment council (SEAC) was concerned about aspects of assessment associated with the development of modular GCE A levels (the major school leaving qualification of those following an academic pathway). These had started to use assessments at the end of each module rather than relying upon the traditional terminal examinations associated with assessment in the 'traditional' A levels, still taken by the majority of candidates. SEAC conducted a major national consultation on synoptic assessment in modular A/AS examinations with a report published in September 1993. Nearly all respondents supported the need to ensure course coherence within modular schemes, but there was not agreement upon the form that would be necessary to achieve that goal. Nor was there a common interpretation about the form and nature any synoptic assessment might take. Indeed most respondents felt that guidance on synoptic assessment should be subject specific. This was partly because some respondents may have felt that accumulated understanding of the subject as a whole was implicitly embedded within the current assessment arrangements, because of the progressive nature of the modules (SEAC 1993).

Synoptic units or integration through assessment processes

If there is a desire for coherence and integration between what might otherwise be fragmented modules or units, then two (or a combination of two) approaches are possible. One would be to design units of learning which are specifically intended to integrate otherwise separate units. The other approach would be to use assessment processes as a means for increasing the likelihood that students integrate what they have learned in their other modules. In the latter approach, the argument is that assessment can focus upon students' accumulated understanding, thereby encouraging breadth and depth of coverage of the subject area.

Varying views on necessity for synoptic assessment

One argument voiced against synoptic assessment for modular A levels was that it was not always required for traditional A levels. This was the case even in subjects which organised the syllabus, the way the subject was taught and exams into separate strands (such as English and History). Another suggestion was that coherence could be achieved by having overarching themes, which required "students to revisit ideas and themes in different contexts, so that earlier learning is of necessity drawn on" (SEAC 1993, p13). It was also emphasised that synoptic assessment could relate to a project, case study, extended assignment or investigation carried out in course work, rather than just being assessed through an examination. Such assessment could have a focus upon problem-solving and/or the application of skills, knowledge and understanding drawn from across the programme.

In a number of subjects (including, for example, business studies, engineering and health and social care) the need for a sound understanding of the inter-relationships between content areas (and/or systems and processes) might signal that it would be useful to require some integration of skills, knowledge and understanding across content areas. In other subjects, it may be that knowledge is more hierarchically organised, such that as long as there is a system of prerequisites and dependency, then earlier learning would be reinforced in later units (SEAC 1993).

At one time SEAC had been clear that external assessment was to be required at the end of each module and at the end of the course (SEAC/SCAA 1993). One possible intention behind the latter assessment was, presumably, so that students could not 'pick off' parts of the course, without giving some thought about how the different components related to one another. However, in practice some subjects do not require any explicit integration whether examinations are terminal and/or modular: for example, different strands of English or chemistry may be examined completely separately. In one sense then, even within 'academic' subjects, the relevance of synoptic assessment may vary greatly.

Both the consultation and the practice within modular or conventional A or AS levels showed continuing variation in how synoptic assessment was treated. The whole issue

was revisited in the second stage of the 1995 Dearing Review of qualifications for 16-19 year olds. That was to consider, among other things, "the adequacy of synoptic assessment in modular A levels, and whether this requirement should be extended to conventional terminal examinations" and "explore whether GNVQs should include 'synoptic assessment' to ensure that students understand the connections between the separate units which make up the GNVQ" (Dearing 1995, p39). This would seem to reflect the realisation that any programme (modular or not) could be scrutinised to see if it is coherent in practice and not fragmented conceptually (Finlayson 1986).

4.5 Performance assessment component of synoptic assessment

A number of recent studies have drawn attention to the importance of how applying knowledge can be as important as the knowledge itself (Reich 1991, Young and Spours 1992, Young 1993). That would suggest that synoptic assessment should seek to address how well students apply knowledge. One line of argument would highlight the possibility of using performance assessments to try to elicit evidence of successful application (and possibly integration) of knowledge through investigations, project work or similar activities. [Performance assessments should meet the criteria of authenticity, directness and cognitive complexity put forward by Moss (1992).]

Synoptic assessment with a performance assessment component is likely in a US context to include a set of key attributes (Linn et al 1991), reflecting "for example, complex learning, higher order thinking, ... tasks requiring multiple steps, and significant commitments of student time and effort" (Baker and O'Neil 1994, p15). That assessment tasks can be designed to be "interesting, meaningful, authentic and challenging" (Dochy and Balke 1995, p1) holds out the possibility that students will be able to demonstrate depth and breadth of performance.

Synoptic assessment does mean that an assessor is able to form a judgement about work and/or performance as a whole. This would seem to 'fit' well with the type of model assessors operate with when making judgements: what Wolf (1994), drawing on evidence from Christie and Forrest (1981), Cresswell (1987) and Brehmer (1989), calls "complex, internalised and holistic" (p34). The key question though is what is the evidence-base on which assessors will make such judgements. Synoptic assessment does

offer the possibility of providing evidence, which is itself attempting to be holistic, in allowing demonstrations of performance in appropriate contexts.

4.6 *Value of using performance assessment and knowledge tests for synoptic purposes*

In Holland synoptic assessment has been used for performance-based testing in the medical field, for students prior to undertaking extensive clinical placements (van Luijk and van der Vleuten 1990). The greatest problem with this approach to assessment was that it was very time-consuming. For this reason, a knowledge test was developed: "the idea behind this kind of testing is that for demonstrating skills one has to *know* how a skill has to be performed" (p4, ibid, emphasis in the original). The test was a multiple-choice text and correlated well with the regular skills test towards the end of the study periods, as the competencies of the students tended to converge at that time.

The systematic use of problem-based testing, used in Limburg since 1982, is now widely used in medical training in many countries. Several lessons, which could apply to other areas making use of a mixture of practical and other skills, could be learned:

- synoptic assessment can be performance-based, involving a series of activities, which require students to integrate what they have learned across the domain
- detailed checklists of assessment requirements can have negative consequences for learning and assessment
- a practically-oriented assessment can be supplemented by a knowledge test, provided it is near the end of the period of study and potentially covers the full range of underpinning knowledge. It is likely that performance on both assessments will correlate quite well if skills, knowledge and understanding have converged with developing competence
- it follows from the above, that teacher assessment may be practical and sufficient (especially if a general rating of overall performance is desirable) for assessment of the practical activities, especially if the knowledge test is externally set and marked.

Overall then, synoptic assessment can utilise the two approaches (performance-based tests and knowledge tests) and it would appear as if they have most value if they are combined.

4.7 Formative and summative functions of assessment

Value of formative dimensions to summative assessment

William and Black (1995) draw attention to how one of the key differences between formative and summative functions of assessment relates to the use of feedback. Sadler (1989) argues that if assessment information is simply recorded, or is expressed solely as a summary grade, then a student has insufficient feedback on which to base appropriate subsequent action. This is important in considering the function of synoptic assessment. If synoptic assessment does not result in meaningful feedback, and action is not taken as a result of that feedback, then an opportunity has been lost to help the student make the inter-relationships that are viewed as important.

This would particularly be the case where student understanding is advanced partly through the ability to make mental representations of key processes and relationships and to refine these 'models' over time, as in engineering. A terminal test, ranging over a number of modules, ending with a summative result is unlikely to contribute anything to this process. [Except that, insofar as students revise and review what they have learned in different units, this may itself encourage students to make the required connections.] A continuing commitment to problem-based learning, with explicit feedback, may be a much more effective way of building up the coherence and integration required. By this token, formative assessment by different assessors in different contexts can nevertheless be regarded as more valid than standardised summative assessment, where the results have little feedback value and/or are not used in this way. William and Black (1995) highlight that Messick (1980), Cronbach (1988) and Madaus (1988) have all argued "that assessments are validated not simply by their results, but also by what happens *as a result* of those results" (p2, emphasis in original).

Use of whole assessment cycle to support development of synoptic understanding

If it is critical for students to develop a synoptic understanding of a whole area, then the whole assessment cycle of elicitation, interpretation and action (William and Black 1995) should be invoked. Evidence for some synoptic understanding needs to be demonstrated, and this could be drawn from performance in a range of contexts. Interpretation could then come from a re-assessment of some or all the available evidence. Action could then be taken to support the development of students' synoptic understanding of the area. This again shows why teacher involvement in synoptic assessment could be valuable: terminal test questions might not be 'rich' enough to demonstrate misunderstandings, and there would be no mechanism by which corrective action could be taken.

Pragmatic question of what would be the most appropriate level of aggregation for summative assessment

The requirements of selection for further education and employment impose pressure for certain types of summative assessment. There may be pressures from selectors for differentiation in ways which do not match well with current grading and reporting processes. The difficulties encountered trying to establish detailed grade criteria are well-documented (Cresswell 1987; Kingdon and Stobart 1988), so the question becomes a pragmatic one of what would be most appropriate level and type of aggregation for summative (and/or synoptic) assessment.

PART TWO: FORM SYNOPTIC ASSESSMENT MIGHT TAKE IN GNVQ

4.8 The nature of assessment in GNVQ

The previous project publication (Brown 1996) highlighted the limitations of criterion-referenced assessment (see also Wolf 1995), and that, in any case GNVQ unit tests could be more accurately described as content-standard tests. GNVQ unit tests are content-standard tests as they are tests composed of items representative of content (tests are considered equivalent as they all contain items from the same content). Hence a candidate's percentage score "represents the percentage of the content that the student has mastered. The reference in this system is the content" (Beggs and Lewis 1995, p65):

> "a content-standard system of measurement is somewhat similar to but not the same as criterion-referenced measurement" (p65): the latter attempts "to locate a student in terms of skills and knowledge required", whereas the "content-standard [system] attempts to locate the student in terms of knowledge as actually possessed at a given point in time"(ibid, p65).

The implication of this is that if GNVQ tests are more precisely defined as a form of content-standard measurement, then the need for very precise specifications of content, test specifications and the like is unnecessary (Brown 1996). The reference system in GNVQ unit tests is neither the group nor a standard it is **the content**. An individual's performance is being compared to their knowledge of specified content at a particular point in time. [Because "the two types of measurement most frequently used in education are norm-referenced measurement and criterion-referenced measurement" (Beggs and Lewis 1975, p68), there is a tendency to think in bi-polar terms. Whereas it is clear that GNVQ test performance is a judgement against a content-standard.]

GNVQ units are tied to required outcomes, but the way GNVQ unit tests operate in practice mean that a claim that this represents competence-based assessment could not be sustained. This is because the requirement that this form of assessment "certifies student progress on the basis of demonstrated achievement of [specified] outcomes" (Wolf 1995, p1) is clearly not met. A pass-mark of 70% coupled with the insufficiency of using a single, simple question to demonstrate achievement of sometimes complex outcomes

are the most obvious ways the requirement for demonstrated achievement of particular outcomes is not met.

None of this, however, should be construed as reducing the need for clear criteria for teaching and learning. The beneficial effects in that respect have been long established (Glaser 1963, Popham 1978). What is under challenge is the value of having very highly detailed criteria, in the mistaken belief that these will then lead to completely objective assessment and a guarantee of competence or mastery if the criteria are met (Wolf 1995). Indeed Wolf argues that even when "specification reaches a point of ridiculous restrictiveness" it "*still* fails to ensure that there is a one-to-one correspondence between assessment and objective" (p59, emphasis in the original).

This line of argument about the need to re-orient GNVQ assessment away from highly detailed criteria of performance has been largely accepted, with the agreement to introduce a new GNVQ model, with revised unit structures, assessment criteria and a new style of external testing (Brown 1996). So it is worth considering the contribution different aspects of the assessment process can make to helping students' accumulated understanding of the domain as a whole and their ability to integrate and apply their developing skills, knowledge and understanding.

The role of the portfolio in the assessment process

Continuous assessment is carried out in relation to the build up of a candidate's portfolio. This serves both formative and summative functions. The build up and progressive assessment of the portfolio can give valuable feedback to tutor and student, as the portfolio can provide evidence of the "developing pattern in students' learning and across a wide range of knowledge and skills, [and] it also allows students to be active in the assessment process, which will help enhance their metacognitive strategies" (Broadfoot 1995, p16). Indeed the involvement of students in the collection of evidence which match their achievements against the performance criteria was seen as a very positive in its active involvement of students in processes of learning and assessment (Brown 1996).

The portfolio does represent a collection of evidence. Hence while a grading based upon defined criteria, across a range of evidence (collected in the portfolio) is summa-

tive, a selection from the portfolio itself can also be used to exemplify achievement, if necessary. The assessment of evidence drawn from the portfolio is cumulative, in that it expands over time, drawing in additional evidence as a fuller picture of the achievements of a student emerges. Indeed in this sense it could be argued that GNVQ already has a significant synoptic assessment in relation to work produced for the portfolio. This assessment role is performed by tutors, although it is subject to verification. One key question is whether this assessment needs to be supplemented by further synoptic assessment, which has a stronger external element.

Level of aggregation of the external tests

It is important to recognise that GNVQ already exemplifies an integrated outcomes approach as the basis for the external assessment of the qualification (Young 1993). That is, each external test requires students to demonstrate sufficient understanding of the knowledge requirements of the unit as a whole to achieve the 70% pass mark. The test specifications identify knowledge within a unit that can be tested, while the test requirements specify the range from which the questions will be drawn. The identification of performance criteria, elements and foci within each unit mean that desirable outcomes are specified in some detail. However, in the current external tests, aggregation for tests purposes at the level of the unit is arbitrary, in that the aggregation could be at a higher (or theoretically even a lower) level. Indeed while the precise details of the proposed new GNVQ assessment model have not yet been finalised, it is certain to involve fewer external tests, with each test covering perhaps a couple of units. In a small way then this could be taken as encouraging some degree of low level integration, as students revise a number of units at the same time for a single test. It would be possible, however, to devise some more explicit form of synoptic assessment, covering a number of units.

4.9 Allowing the development of skills over time

One merit in a greater emphasis on synoptic assessment is that it would allow more time for maturation and student development. At the moment some students complete units, and take tests, early in their programme, after they have only been used to the context, terminology and so on for a relatively short period of time. In similar fashion, synoptic assessment might be more amenable to supporting a more gradual build-up in development of skills using quantitative methods, technical concepts or the application of concepts. Synoptic assessment may be more in tune with the curricular aims of GNVQ and as such may be considered as a better 'fit for purpose'. This would particularly be the case if synoptic assessment gave the opportunity to demonstrate integration of understanding of different strands (units) of the programme.

4.10 Synoptic assessment and standard assignments

One means of assessing how far students have brought together their knowledge, skills and understanding from across the programme as a whole would be to set a coursework assignment, project or investigation, which explicitly attempted to be integrative. This could be an externally-set standard assignment. The argument in favour of synoptic assessment that goes beyond traditional testing (whether by written exams or multiple-choice testing) is that it allows for coverage of a greater range of activities. Besides extending the breadth of evidence upon which assessment decisions could be based, it would also have a much more positive effect on student learning. It would also fit with a constructivist view, as the design and choice of assessment tasks could be set within the view of the curriculum as a coherent whole (Burton 1995).

Externally-set assignments could highlight the importance of connecting networks of concepts and relationships, as well as giving opportunities for the demonstration of planning, problem-solving and other strategic skills (Ridgway and Schoenfeld 1994). The cognitive processes used by students are therefore much more representative of those used in the vocational area as a whole, than those that are required for performance on written exams or multiple-choice tests.

If investigations or project work are used as one means of generating synoptic assessment, it may be that only broad assessment criteria are set for assessors to follow. This would be in tune with the finding that students undertaking such work could combine different components or sets of skills in different ways. Scoring on separate criteria has proved unworkable in the past, and experience has shown it is more appropriate to rely upon assessors to make an overall judgement of the investigations (Wolf 1990). It may be that in any assessment of investigations and extended assignments a choice has to be made between some possible loss of public credibility if no external assessors are involved and some loss of possibilities for assessment of some of the processes of investigation if they are (Torrance 1995). Teachers though are undoubtedly in the best position to determine the extent of success or failure in extended assignments (Torrance 1984), so having the element of externality come through the setting and moderation of standard assignments might represent the best compromise.

Standard assignments, which are externally set but teacher marked, would appear to have considerable merit for their effect on teaching and learning processes. They could also have a dual assessment function, acting to address issues of comparability and public confidence, as well as being an important form of formative assessment. If teachers are assessing standard assignments, then to address issues of public confidence and concerns about comparability, it is important that the teacher assessments are actively moderated. This is an acknowledgement of the significance of what Broadfoot and others (1991) call the "micro issues around the quality of any of the assessment information generated" (p157).

If standard assignments are to be valuable in the **process** of helping students make necessary inter-relationships between different components of the programme, and develop a synoptic appreciation of those inter-relationships, then it is important that any assessments have a formative function. Practically, this means that, although such assignments have to be completed and assessed towards the end of the programme, these processes should not be carried out so late that feedback cannot meaningfully be given and incorporated within further work. In particular, 'lessons learned' from carrying out, and feedback on, the standard assignment should be incorporated within the portfolio. In this way, performance and reflection on the standard assignment could contribute

to the process and outcomes assessment components involved in the grading of the portfolio.

A further advantage of such an approach is that it would be clear that assessment is being considered in relation to how it interacts with teaching and learning processes and teacher development, rather than being considered more or less in isolation (Butterfield 1995). The emphasis on the formative dimension also makes sense in terms of progression: in that it would facilitate the use of the results as a guide to planning future work. Further, a major point of bringing understanding and applications together at the end of the programme is that the student can draw upon her or his synoptic understanding as a basis from which to continue their development in education and/or employment.

The coupling of assessment of externally set standard performance-based assignments with the compilation of a portfolio together offer a potentially powerful combination, which could have beneficial effects for teaching, learning and assessment. Broadfoot (1995) argues strongly along these lines: endorsing the value of "carefully structured, and externally supported, performance assessments backed up by a portfolio of evidence" (p34).

4.11 Synoptic knowledge tests

Knowledge tests are an insufficient basis for synoptic assessment, if the latter term is broadly defined. (In section 1, a broader definition was given "synoptic assessment should test candidates' accumulated understanding of the domain as a whole and their abilities to integrate and apply their skills, knowledge and understanding in appropriate contexts".) On the other hand, following the argument outlined in Section 6, synoptic knowledge tests can provide a valid and practical complement to performance-based synoptic assessment, particularly if that form of assessment would otherwise be very time-consuming.

There seems little doubt then that, especially if the format allows for some short answer questions as is proposed for the new assessment model, it would be possible to devise synoptic tests, that would allow assessment of students' higher order reasoning skills and of their understanding of the domain as a whole. It would not, however, necessarily be advisable to introduce these in all subject areas. It might be more appropriate to look

at the advantages and disadvantages of introducing such tests, in light of the particular circumstances and requirements of units and the vocational area as a whole. Indeed it may be that there are 'natural' synoptic units in some areas. Another reason for caution might be that it would be advisable to engage in pre-testing to make sure that the level and type of the tests were appropriate to the level of the qualification (Leigh 1995).

4.12 The combination of standard assignments and knowledge tests for synoptic purposes

Synoptic assessment in GNVQ could usefully have two components: an externally set teacher assessed standard assignment, comprising an integrative exercise or series of practical activities, and external knowledge tests. The former could have a positive feedback to the teaching and learning activities as a whole. Tutors and students would be aware that they were working towards being able to put together what they have achieved in the learning programme as a whole. Because tutors would assess the exercises or activities, the criteria could be broadly drawn (as experience shows detailed checklists are inappropriate and unhelpful). The external tests could be seen as an additional way of addressing issues of public confidence, credibility (Wood 1985) and accountability.

The explicit use of synoptic assessment of knowledge and practical application may also go some way to meeting the criticisms of Steedman (1994), on the need to draw performance on these elements together at the end of a programme and that these assessments should have an external dimension. This would seem an imaginative solution to this issue, without having recourse to traditional terminal assessments, along the lines of the "formal written test together with assessment of practical performance in a set piece of work" expected of German apprentices (Steedman 1994, p34). [The problem of relying upon traditional terminal assessments is that they often have an adverse effect on the motivation and self-esteem of students, especially on those that have not previously been highly successful academically. Young Germans in the *Berufsschulen* too were often highly critical that their experiences of teaching and learning in vocational education were 'too much like school' (Behrens and Brown 1994).]

The inter-relationship between the two types of synoptic assessment could also address the issue of comparability of standards. If students had been able to bring together the different strands of what they had been learning, then performance on the two types of assessment should be broadly in line. This would then allow investigation of the circumstances when there was a discrepancy between the two types of assessment for particular centres.

The moderation of teacher assessment through the inclusion of a standardised assessment component is likely to be welcomed. GNVQ tutors had welcomed the element of externality in the current unit tests as important in giving the qualification greater public credibility. The fact that assessment evidence, under this model, would be drawn from a number of sources could be a strength, although moderation processes then become crucial. Moderation of the assessment evidence can be statistical, by inspection or by a combination of both (NEA 1990). Within GNVQ it would be possible to use both methods. That is, inspection of the assessment processes, including sampling the processes in relation to the standard assignments of particular students, by the external verifier should help tutors make consistent and broadly comparable judgements. Additionally, statistical checks could be run at the level of analysis of the centre to investigate whether performance of students on the assignment and in the portfolio do correlate fairly well with performance on the tests, particularly on any synoptic knowledge test. Any major disparity in the 'signals' between different types of assessment could be an issue for further investigation during the moderation process.

The combination of a performance-based standard assignment together with some form of synoptic knowledge testing would seem to demonstrate a 'fitness for purpose'. That is, it would offer the opportunity for students to demonstrate an overall grasp of the programme as a whole, in a way that demonstrated not only accumulated understanding but also that they could integrate and apply their skills, knowledge and understanding in appropriate contexts.

4.13 Synoptic assessment and the portfolio

Although the point was made earlier (in section 8) that GNVQ already has an element of synoptic assessment in relation to work produced for the portfolio. However, the extent of this is variable due to concerns about what goes into the portfolio. The requirement for evidence of comprehensive coverage may sometimes mean that information collection takes precedence over other functions. For example, the Further Education Funding Council (FEFC) report (1994) argued that in Advanced Leisure and Tourism "too often the students portfolio of evidence reflected the acquisition of information rather than the interpretation and analysis expected at this level" (p23).

A more explicit shift in emphasis such that students recognise that the evidence they place in their portfolio should more clearly demonstrate possession of higher order skills has implications for the development of a synoptic understanding of the domain as a whole. That is, because understanding of (parts of) units should already be partly integrated, that should make it easier to take the next step where the links of understanding, integration and application are made across the domain as a whole. Viewed in this way, there would be coherence in the evidence being accumulated as a whole through the differing forms of assessment (standard assignments, synoptic test, unit tests and portfolio), within an overall assessment load which would be much more manageable than the burdens of the original assessment model.

4.14 Context of proposed changes to GNVQ assessment procedures

Following on from major reviews of GNVQ (Capey 1995; Dearing 1996), NCVQ acknowledged that there were major problems with GNVQ assessment processes and that the whole GNVQ assessment model needed to be overhauled (Brown 1996). In this context, it was possible that synoptic assessment could play a role in helping address a number of assessment concerns. Assignments, tests and the portfolio could all have synoptic dimensions and encourage achievement of higher order skills of analysis, synthesis, evaluation and the like, and provide evidence of a student's overall grasp of the subject area.

Those devising or revising any assessment system have to make choices about the approach to making assessments, aggregation, monitoring and reporting. These may be influenced by political pressure from some or all those with an interest in the system, as well as by issues associated with practicability and implementation, depending upon how the system works in practice.

Some form of synoptic assessment, provided it is mainly based on assignments rather than just tests, is likely to be welcomed by teachers and students as giving an opportunity for students to demonstrate their skills, knowledge and understanding in a way that has external credibility. Synoptic assessment through an externally set, teacher marked and externally moderated standard assignment could be coupled, if necessary, with a synoptic knowledge test. Depending upon the particular circumstances, these assessments could range over a number of units. As a consequence, the requirement for the evidence in a student's portfolio to demonstrate complete coverage of range and performance criteria would be replaced with a more explicit requirement that the evidence in the portfolio should represent achievement of the requisite higher order skills of analysis, evaluation, synthesis and the like.

Such an approach to assessment would:

- by its very nature, provide evidence of the extent to which a student had an overall grasp of the subject area
- introduce greater rigour into the assessment process (aspects of the external testing programme would be more challenging and performance on the externally set and moderated standard assignment would contribute to the overall grading of the qualification)
- be less demanding of the time of teachers (they would assess the quality of work produced for the portfolio and the standard assignment, but they would no longer be required to check portfolio for complete coverage of performance criteria and range)
- represent a much better 'fit for purpose' to the original curriculum objectives for GNVQ than the current assessment arrangements
- be much more manageable and cost-effective

- give more meaningful information to employers and further and higher education institutions as a basis for progression.

As a consequence of the Capey (1995) and Dearing (1996) reviews, impetus was given to a change to a less technical, more easily understood general expression of content and outcomes for teaching, learning and assessment, and this in turn meant there was scope for a more imaginative approach to GNVQ assessment. On the other hand, there are practical constraints on the degree of change it is thought will be desirable, given that a major weakness of the introduction and implementation of GNVQ was in its whole approach to the 'management of change' (Brown 1996). The early years of GNVQ were marked by almost continual changes, much to the frustration of practitioners (Capey 1995). So while there will be significant changes to assessment policy under the 'new model' GNVQ, these changes will probably represent a compromise between what would be 'ideal' and what is practicable.

This report should therefore be seen as a contribution to a debate about the future shape of GNVQ assessment policy and, in particular, it represents an opportunity to lay out some possibilities for increasing the degree of synoptic assessment within GNVQ. This discussion could also be of wider applicability to other countries in Europe, where there are vocational education pathways oriented towards employment and further study, as some form of synoptic assessment could signal readiness for subsequent progression.

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List of Abbreviations Used

A level	Advanced level
AS level	Advanced Supplementary level
FEFC	Further Education Funding Council
GCE	General Certificate of Education
GNVQ	General National Vocational Qualification
NCVQ	National Council for Vocational Qualifications
NEA	Northern Examining Association
SCAA	School Curriculum and Assessment Authority
SEAC	School Examinations and Assessment Council

Chapter 5

FACILITATING PROGRESSION TO HIGHER EDUCATION

ENGLAND AND THE NETHERLANDS

Alan Brown, Trudy Moerkamp & Eva Voncken

Summary

One of the thematic studies of the INTEQUAL project involved an investigation of how to facilitate progression from school-based vocational pathways in England and the Netherlands. This investigation drew mainly upon secondary analysis of studies of issues around the progression to higher education of students from senior vocational education (mbo) in the Netherlands and Advanced General National Vocational Qualifications (GNVQ) programmes in England. The starting point of this analysis was the widespread perception that students from vocational pathways may have particular problems with aspects of the transition to higher education.

In the Netherlands, about half the age cohort take mbo and these programmes have traditionally been highly regarded in the labour market. Additionally, however, increasing numbers (about 30%) of mbo graduates have entered hbo (higher vocational education), and they now comprise about 40% of all entrants to hbo. Mbo graduates generally perform at about the same level as graduates from havo (senior general secondary education) in the first two years of hbo, although both groups have relatively high drop-out rates. However, while unsuccessful havo students tend to switch to another area within hbo, mbo students are more likely to leave higher education altogether.

One important question therefore is can action be taken to reduce the attrition rate of mbo graduates in hbo. Traditionally, as mbo has been primarily orientated towards qualifying students for the labour market, the attainment targets and curricular design of mbo have reflected this priority. However, more recently, attempts have been made to design attainment targets appropriate for further study in higher education and to

produce modules specifically geared to facilitating transfer of students to vocational higher education.

Mbo and hbo teachers are in broad agreement on the strengths and weaknesses of mbo students who continue their studies in hbo. The former mbo students' strengths are their motivation, occupational skills and knowledge of the professional domain. Their weaknesses relate to insufficient development of their underpinning theoretical knowledge, language skills, study skills and meta-cognitive skills. Some of these problems may be addressed in future, however, by a recent shift of emphasis in mbo courses towards more self-reliant learning and problem-based learning. Mbo graduates themselves also have ideas about how the mbo curriculum could be further strengthened, and these include giving greater attention to information technology, organisational skills and writing reports.

One striking feature of the discussions about mbo:hbo progression is that the focus has been almost exclusively upon how to 'strengthen' mbo, rather than giving any consideration to ways that hbo might build upon the strengths of mbo graduates. For example, hbo itself is still very 'academic', and giving hbo a more genuinely vocational emphasis might be another way of bridging the mbo:hbo transition, rather than always seeking to make mbo more academic.

In England, Advanced GNVQ programmes have been more specifically focused upon facilitating entry to higher education. Indeed preparation for the labour market is downplayed to such an extent that GNVQ could be viewed as having a pre-vocational rather than an occupational emphasis. Progression prospects for entry into higher education are generally good for those students who successfully complete Advanced GNVQ, although large numbers of students fail to complete their programmes within two years.

GNVQ was seen by both students and staff as having strengths and weaknesses as a preparation for higher education. Both groups pointed to the value of independent learning, communication and information technology skills of former GNVQ students. On the other hand, they shared concerns about students' lack of experience of writing essays and taking examinations necessary for many HE programmes, and the insuffi-

cient depth of underpinning knowledge required for particular HE courses, especially if they had a high scientific or mathematical content.

There are two types of action, however, which can be taken to help smooth GNVQ:HE transitions. On the one hand, given the diversity of type of HE programmes in England, GNVQ students could be encouraged to apply to HE programmes where there is a high degree of 'fit' between the existing curricula. On the other hand, there have been explicit attempts to use compacts, or other link arrangements to try to ensure curricular progression between GNVQ:HE curricula. Such compacts seek to play down the 'structural break' between different types of provision.

In both countries it is now possible for students to take enriched or enhanced mbo or GNVQ programmes that can increase their chances of being successful in HE. More generally, each country could also learn from the other. The Netherlands could pick up ideas from GNVQ about how to develop independent learning and communication skills prior to entry to HE, while England could learn from mbo about the value of developing a substantive knowledge base so as to underpin entry into either the labour market or HE. Indeed the challenge for the future for both mbo and GNVQ is in finding ways to develop a substantive knowledge base, and a range of core skills/key qualifications linked to the ability to work as a member of team, flexibility and a continuing commitment to learning.

5.1 Introduction

This chapter gives the results of an investigation carried out in England and the Netherlands into how to support transitions to higher education of students coming from school-based vocational pathways. This study was carried out as part of a seven country Leonardo (INTEQUAL) project looking at qualifications with a dual orientation both to the labour market and higher education. The investigation looked at issues around the progression to higher education of students from senior vocational education (mbo) in the Netherlands and Advanced General National Vocational Qualifications (GNVQ) programmes in England.

Both GNVQ and mbo are predominantly full-time school/college-based vocational pathways, aimed primarily at 16-19 (20) year olds, and are clearly differentiated from

academic general education pathways. The starting point for the analysis was the widespread perception that students from vocational pathways may have particular problems with aspects of the transition to higher education. The position of such students will be examined in each country, before attempting a comparative Anglo-Dutch analysis. In this report, particular attention is given to the perceptions of staff and students of the skills required to be successful in higher education (HE). Companion papers (Brown, Moerkamp and Voncken, 1997a and 1997b) examine these issues in greater depth, while an earlier paper examined the development of key (core) skills required in HE across contexts and over time (Brown, 1997).

5.2 THE NETHERLANDS:

Progression from mbo in context

Earlier work gave fuller descriptions of mbo-courses and their role in facilitating both entry into the labour market and progression to higher vocational education (Moerkamp & Voncken, 1996; Manning, 1996). Senior secondary vocational education (mbo) in the Netherlands has therefore a double qualifying function. Traditionally, mbo courses had qualified students for the labour market. However, an mbo-diploma simultaneously qualifies students to enter higher vocational education (hbo). Ever since the beginning of the eighties the latter function of mbo, offering possibilities to transfer to hbo, has gained in popularity. Ten years ago about 10% of all mbo graduates continued their education in hbo. Nowadays about 30% of the mbo students enter hbo courses after graduation. Statistical analyses and projections indicate that in the year 2000 almost 45% of the mbo graduates will continue their study in hbo, and less than 50% will enter the labour market after graduation (OCen W, 1995). These figures put the double qualifying function of mbo in a new perspective. The question is whether mbo schools should change their qualification strategies and adjust more to the requirements of hbo. Or should the conclusion drawn from these increasing transfer rates be that mbo has been successful in realising double qualifications just by concentrating on the first goal: qualification for the labour market?

Table 1 shows the number of mbo graduates that continue in hbo and the number of mbo graduates that enter the labour market.

Table 1 Numbers of mbo students that enter hbo or the labour market after graduation

	1975	1980	1985	1990	1995
Number of students transferring to hbo					
absolute numbers (x1000)	2,1	3,9	5,6	12,3	15,3
%	**6%**	**10%**	**10%**	**20%**	**29%**
Number of students entering the labour market					
absolute (x1000)	31,9	33,5	44,5	43,6	36,0
%	**87%**	**86%**	**83%**	**72%**	**68%**
TOTAL absolute (x1000)	34	37,4	50,1	55,9	51,3
TOTAL %*	**93%**	**96%**	**93%**	**92%**	**97%**

* does not add up to 100% as a small percentage continue in mbo

(National Bureau of Statistics: CBS, educational matrices 1975-1995).

In the last 25 years the mbo population has increased from 77,000 to 290,000 students, taking up over half of the group of young people aged between 16 and 19. Because of this huge growth, the increase of students continuing their study in hbo did not automatically lead to a decrease in the number of mbo graduates entering the labour market. Mbo could 'serve' hbo as well as the labour market. So far the labour market has been the main 'customer' of mbo schools, but the importance of hbo could not be ignored. In some occupational sectors already more than one third of the mbo graduates continue their education in hbo colleges. Mbo includes courses in four occupational sectors: technical courses, agricultural courses, health care and administrative/economic (commercial) courses. Although participation in all of them has increased; the increase has been most heavily concentrated in the administrative/economic sector. In 1995, 30% of all graduates from technical mbo courses, 18% of graduates from agricultural courses, 32% of graduates from economics and 23% of the graduates in health care and social services, continued their education in hbo, (CBS, 1996).

Higher vocational education (hbo)

In common with mbo, the number of students attending hbo schools has increased tremendously. In 30 years it has multiplied five-fold. In 1994 63,000 students entered hbo. Formal entry requirements for hbo are an havo-diploma or an mbo-diploma[1]. Havo is senior general secondary education, which gives access to hbo, but not to university education (wo). Direct entry to university from school is restricted to holders of the pre-university education (vwo) certificate, with this latter group eligible to enter either wo or hbo. Table 2 shows the direct inflow into the first year of hbo, in the different sectors of hbo.

Table 2 Qualification of students entering the first year in hbo (1994/1995)

inflow from:		hbo sectors:				
		technical education	commercial education	teacher education	other	total
havo	39%	25%	26%	26%	24%	100%
mbo	39%	37%	36%	10%	17%	100%
vwo	22%	28%	45%	10%	17%	100%
total	100%					

(OCen W, 1996, based on CBS cohort study)

These figures show that students from the vocational track still form a minority in hbo. On the other hand, the number of mbo graduates transferring to hbo increased from 5,500 in 1985 to 15,500 in 1994. While the number of students from general education entering hbo has stabilised at around 25,000. This implies that during the last fifteen years mbo graduates have become more and more important for hbo schools.

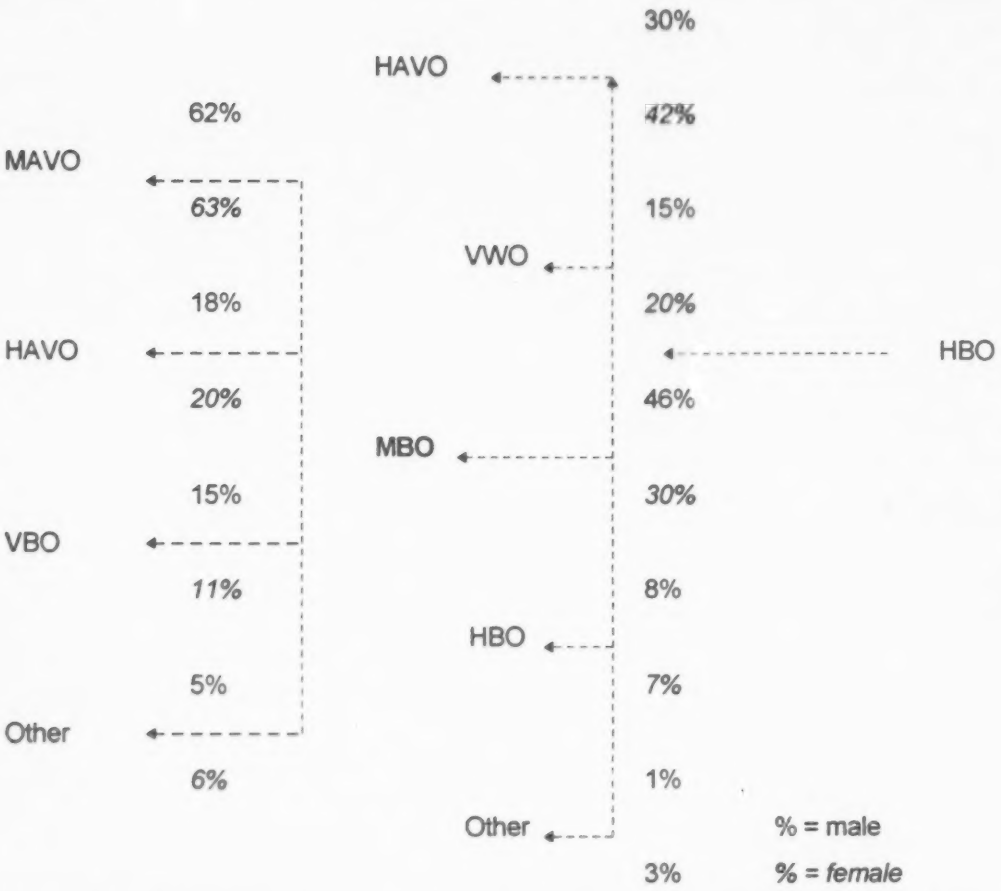
[1] In 1996 the Adult and Vocational Act (WEB) came into force. At the heart of the WEB is a national qualification structure for vocational education. The levels of qualification are in line with the European SEDOC system. Mbo courses at level IV (middle management training) are double qualification courses, giving access to both hbo and the labour market, while mbo qualifications at level III (professional training) which do not give access to higher education are not. Exceptions have been made for a few courses at level III.

In Figure 1 the education route followed by mbo students entering hbo is presented. These data are drawn from studies by the Research Centre for Education and Labour Market (ROA), which since the beginning of the nineties periodically publishes the results of a large-scale survey among school leavers from full time education. The main purpose of this survey[2] is to gain information on the destination of school leavers, whether they are in further education or in the labour market, and the interface between education and labour market or further study.

Most mbo students continuing their education in hbo, started their mbo career after graduation in mavo (junior general secondary education). About 20% followed a track that is regarded as an indirect route, moving from senior general education to senior vocational education before progressing to higher vocational education: havo-mbo-hbo. Apparently mbo students with general education backgrounds have better chances for progression into hbo, than students with vocational education backgrounds. However, the transfer rates of mbo students with vocational education backgrounds should not be underestimated. The status of vbo (pre-vocational education) is very low and vbo is regarded as an alternative only for those students who are considered not able to participate in general education. Despite this more than 10% of these 'low achievers' appear to end up in hbo eventually.

[2] This survey is called RUBS: registration of outflow and destination of school leavers.

Figure 1: progression routes of students making mbo:hbo transitions



(Source: Schoolverlaters tussen onderwijs en arbeidsmarkt (RUBS) 1996, ROA, 1997).

Statistical analysis indicates that female students, students who are older and students who started in vbo, are those mbo students least likely to transfer to hbo (Roeleveld & Babeliowsky, 1996). The number of weeks spent on practical training has no apparent effect on the likelihood of progression to hbo, nor does the existence of vocational guidance activities on opportunities for further study. Students who had made plans to proceed to further education at the start of their mbo career, and those who think financial rewards from further education will be higher, tend to be those most likely to transfer to hbo (Roeleveld & Babeliowsky, 1996).

Already at the start of their mbo school career, many students intend to acquire an hbo diploma. About 50% of all mbo students originally from vbo and mavo, and about 20% of students originally from havo, intend to continue their education in hbo after mbo graduation (Roeleveld & Babeliowsky, 1996). Moerkamp & Volman (1997) notice, on the basis of these data, that double qualifications make mbo an attractive educational route, in many respects equivalent to havo.

Success rates of mbo graduates in hbo

Table 3 shows the number of students passing the qualifying exams for further study after one or two years in hbo, differentiating between students entering hbo with an havo, vwo or mbo-diploma. In general, the success rate of mbo graduates transferring to hbo is more or less the same as those progressing from havo. However, differences exist between sectors: mbo-students from long technical courses having a higher success rate than mbo-students from commercial/administrative services or social services. Moreover, mbo-students from the technical sector show better results in the hbo-technical courses compared to havo-students.

Table 3 Output after two years of hbo (percentage students that finished propaedeutic courses)

	technical	commercial education	teacher education	other	total
havo after:					
1 year	46%	40%	69%	70%	57%
2 years	73%	59%	74%	77%	74%
mbo after:					
1 year	64%	45%	60%	66%	58%
2 years	79%	64%	67%	76%	74%
vwo after:					
1 year	72%	68%	70%	74%	73%
2 years	86%	80%	72%	80%	85%

(OCen W, 1996, based on CBS cohort-study).

Table 4 shows the drop-out rates of havo- and mbo-students after having spent two years in hbo-courses (without finishing the propaedeutic course). Especially the sector 'commercial

education' shows rather high drop-out rates. Overall havo-students tend to have lower drop-out-rates than mbo-students. The drop-out rate of vwo-students is even lower: just 10%. Unsuccessful mbo students (in hbo) tend to discontinue their hbo careers, while unsuccessful havo students often try to make a fresh start in another hbo course (Roeleveld and Babeliowsky, 1996). In this respect mbo students 'suffer' from the consequences of having made an occupational choice at an early stage of their school career, in that they are not qualified to enter an alternative course. Although on the positive side, they do have a qualification that has a genuine labour market value, and this means work may be a genuine alternative to remaining in education.

Table 4 Drop-out of havo- and mbo-students after two years in hbo

	technical	commercial	teacher training/ other studies	total
havo	11%	24%	16%	17%
mbo	14%	28%	20%	20%

(O Cen W, 1996, based on CBS cohort-study).

Labour market positions of graduates from vocational and general tracks

Mbo graduates hold the strongest position on the labour market immediately upon leaving school, unemployment being low in this category (see Table 5). It does not take these school leavers very long to find a job. The number of available job openings has risen quite fast, with the exception of the economic sectors tourism and recreation, motor mechanics and socio-cultural work. Graduates from havo/vwo and from university currently have weak initial labour market positions. For graduates from hbo the unemployment figure equals the average for all school leavers (see Table 5), as it can take them quite some time to find a job. Overall, all courses within mbo and hbo offer quite good longer-term labour market perspectives, in comparison to the prospects for havo/vwo graduates (see Table 6).

Table 5 Figures on (un)employment

level of training:	school leavers entering the labour market		job openings	unemployment figure(%)	
	1995	1996	1995	1995	1996
	x 1000	x 1000	x 1000	x 1000	x 1000
basic education/mavo	18	20	5.3	5 (28%)	4 (20%)
pre-vocational education (vbo)	23	21	4.8	6 (26%)	4 (19%)
havo/vwo	14	15	0.7	4 (29%)	4 (27%)
mbo	60	60	6.1	11 (1-8%)	10 (17%)
hbo	35	42	2.4	8 (23%)	8 (19%)
university	22	27	2.3	6 (27%)	8 (29%)
total:	172	185	19.5	40 (23-%)	38 (20%)

(Perspectief voor Schoolverlaters? Schoolverlatersbrief 1997: een analyse van de arbeidsmarktkansen, Arbeidsvoorziening, 1997).

Table 6 Working population, employed and unemployed

level of training:	working population			unemployment figure (%%)		
	total x 1000	em-ployed x 1000	unem-ployed x 1000	total %	male %	female %
havo/vwo	365	323	42	11.5	10.3	12.9
mbo	2600	2456	144	5.5	3.5	9.8
- health care & social services	770	713	57	7.4	3.6	8.9
- technical sector	987	949	38	3.9	3.2	10.7
- administr./commercial services	835	785	50	6.0	4.0	8.2
hbo	1152	1092	60	5.2	4.0	6.7
- health care & social services	642	606	36	5.6	4.0	6.8
- technical sector	227	218	9	4.0	3.5	8.8
- administr./commercial services	281	267	14	5.0	4.4	6.1
total*	6681	6187	494	7.4	5.5	10.4

* includes figures on basic education, junior secondary stage and university, not shown in the table.

(Perspectief voor Schoolverlaters? Schoolverlatersbrief 1997: een analyse van de arbeidsmarktkansen, Arbeidsvoorziening, 1997).

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Mbo attainment targets and hbo entry requirements

The first goal of mbo courses is qualifying students for the labour market. Procedures that are followed in order to design the mbo curricula reflect this priority. The business community and education together are responsible for the development of job-profiles and attainment targets. As a result of this method mbo courses are much more competency based than they were five years ago. The government no longer decides on subjects and issues tables indicating the number of lessons per subject. (They used to do this five years ago.) The only guidelines for schools are the attainment targets. These attainment targets are developed by national vocational education bodies, but are approved by the government. The attainment targets should reflect the three main goals of mbo[3]:

- qualifying for the labour market
- qualifying for good citizenship
- qualifying for further study (in higher education).

The chosen procedure for developing mbo curricula proved to be a good one for the development of attainment targets referring to the first goal (qualifying for the labour market). However, the procedure appeared not to match the second and third goals. Some people say that mbo courses are much more 'vocational' than they used to be a few years ago. This development gives cause for concern, particularly for teachers of Dutch and foreign languages. More than 60% of these teachers think that the status and position of language teaching has worsened during the last five years. About one third hold the opinion that the relationship between mbo and hbo with regard to language teaching is unsatisfactory (Van Gelderen & Oostdam, 1996).

The attainment targets appropriate for further study in higher education have been developed by following a temporary procedure. These targets have been drawn up by a project group of mbo and hbo experts. Hbo has formulated requirements for entry to higher education, mostly deduced from havo entry requirements. The hbo requirements are remarkably 'study oriented' rather than 'occupation oriented'. Hbo transfer programmes in mbo courses consist of a set of optional modules. The purpose of these modules is to support students' progres-

[3] Although mbo is commonly seen as double qualifying, in fact mbo is triple qualifying.

sion to hbo. However, all mbo graduates at level IV, not only those who followed hbo transfer programmes, are entitled to enter hbo courses.

As part of this study exit qualification documents have been analysed in three occupational sectors: technical (electrical engineering, mechanical engineering), social services and welfare work, and economic/administrative (business administration, public administration). In the technical courses (T-courses), and the courses in the economic/administrative sector (EA-courses), attainment targets have been formulated with specific regard to progression into hbo. With regard to the courses in the social services and welfare sector (S-courses), no hbo transfer programme has been distinguished. The documents with regard to the S-courses only recognise that diplomas of these courses formally entitle students to continue their study in hbo. A second remark with regard to hbo progression in this document is that schools have the possibility to use the unprescribed part of the curriculum (20% of total teaching time) to pay more attention to programmes aimed at supporting progression.

The EA-courses give their students the opportunity to follow a transfer programme. This module is one of six modules of which students should choose two. Transfer modules 'compete' with modules like another foreign language, or specific domain related subjects. The transfer module covers about 5% of the total teaching time. Students study (extra) maths, English language, economic studies, accountancy studies, and social studies. The T-courses follow a similar model to the EA-courses. Students have the possibility to choose a transfer programme. Transfer modules within the electrical engineering courses for instance 'compete' with modules aimed at developing business skills and commercial skills. The transfer module in the T-courses covers about 9% of the total teaching time. The documents with regard to the T-courses explicitly stress that the whole curriculum, including purely vocational parts, prepare students for progression into hbo. In other words, these T-courses claim a real double qualifying status. Students who prefer to do a transfer module within the T-courses study (extra) Dutch and English language, maths and physics.

Skills to be successful in higher education according to mbo and hbo teachers

In this section skills of mbo graduates are discussed from the perspective of teachers in mbo and hbo schools. Van Gennip et al (1995) explored the relevance of the mbo curriculum for

further study in hbo. They questioned teachers of 20 mbo and 16 hbo schools. The first question was: which parts of the mbo curriculum are highly relevant in order to be successful in hbo, according to mbo teachers? Overall, mbo teachers consider between 20% and 90% of the curriculum to be relevant for hbo. There is much variation between respondents, schools and courses. This indicates the problems respondents have with the concept 'relevant for hbo study'. Some of them are adamant that the mbo curriculum has almost a 100% relevance for continued study in hbo.

The study also distinguishes teachers' perceptions of the value of general subjects and vocational subjects. The researchers expected general subjects to be considered more relevant than vocational subjects. The research results, however, did not confirm these expectations. Some general subjects were considered relevant, but others were not. There seems to be a consensus about the value of the Dutch language, foreign languages and computer science. But, in the opinion of mbo teachers, subjects like social studies, social skills, physical education and art education merely contribute to the second goal (citizenship and general education). Whereas some vocational subjects are regarded as highly relevant for hbo: in some instances respondents acknowledged the value of all vocational subjects (Van Gennip et al, 1995).

According to mbo teachers of engineering courses maths and science are considered highly relevant (100%) for technological studies in higher education, as are vocational subjects like electrical engineering, digital techniques, and hardware architecture. General subjects such as social studies and foreign languages are, in their opinion, less relevant. Teachers in business studies consider subjects such as marketing studies and accountancy studies are 100% relevant, whereas social studies and foreign languages are perceived as less relevant for higher education. The researchers conclude that general subjects are certainly not regarded as 100% relevant for higher education, whereas on the other hand some vocational subjects are considered as highly relevant for both higher education and the labour market. In other words, these vocational subjects are, in the opinion of mbo teachers, dual oriented. This opinion was verified with hbo teachers. Some of them did not respond to this question because they found it difficult to form their opinion just on the basis of subject names and study hours, instead of being based upon an examination of the subject content and the curriculum. However, the opinion of hbo teachers who did respond is remarkable, because they stress the value of general subjects like foreign languages and social studies much more

than their colleagues in mbo, and in some cases they regard vocational subjects as irrelevant (Van Gennip et al, 1995).

A second question in the study was: what are the strengths and weaknesses of mbo students who continue their studies in hbo, according to mbo and hbo teachers? Apparently there is consensus between mbo teachers and hbo teachers with regard to the strong points of mbo graduates: their professional skills, motivation and knowledge of the professional domain (Van Gennip et al, 1995). Table 7 summarises the opinions of the two sets of teachers with regard to their perceptions of the weaknesses of mbo graduates in hbo courses.

Table 7 Perceived weaknesses of mbo graduates, who continued their studies in higher education, according to mbo and hbo teachers

Weaknesses according to mbo teachers	Weaknesses according to hbo teachers
* general language skills * knowledge of mathematics and physics (respondents from technical courses) * study skills, self-discipline, self reliant learning, planning skills * responsibility (respondents from health care/social studies) * theoretical skills/ intellectual attitude * intelligence/I.Q.	* language skills * knowledge of occupationally related subjects (e.g. economics, science) * general knowledge * study skills, self reliant learning * strategic skills, vision * critical attitude toward professional practice * ability to integrate theory and practice * intellectual skills/theoretical skills

(Van Gennip et al, 1995).

Overall, there seems to be more or less a consensus on the weaknesses too. Summarising, the main weaknesses are perceived to relate to: knowledge of occupationally related subjects, language skills, study skills and attitudes, and meta-cognitive skills (and attitudes).

Moerkamp and Volman (1997) studied the relationship between mbo and hbo, mainly from a policy perspective. They also carried out a few case studies in which mbo and hbo teachers were questioned about problems mbo graduates experience in hbo. Their findings roughly correspond with the findings of Van Gennip et al (1995). Although some teachers could not think of any problems, as they pointed out that mbo graduates perform as well or even better than havo graduates, others listed problems that are very similar to those outlined in Table 7. According to teachers in mbo as well as hbo, mbo graduates are hard workers. They are used to studying hard and seriously, but they are less able to work independently, without instructions and direction from their teachers. They are more dependent upon direct instructions and teacher support. Some teachers in mbo pointed out though that there has been a recent shift of emphasis in mbo courses towards more self-reliant learning, problem based learning and 'open' learning. This shift might improve the performance of mbo graduates in hbo.

With regard to language skills, problems seemed to occur in particular with respect to close reading, understanding and analysing texts. In relation to knowledge in specific occupational subjects, teachers not only observe that mbo graduates have a lack in the depth of their knowledge at the start of their hbo courses, but also that they seem to have problems in acquiring new knowledge during their hbo study. Most of the problems teachers observe are related to meta-cognitive skills. Mbo teachers and hbo teachers, however, do not always agree on the implications of this for the hbo curriculum. For instance, an hbo teacher expects the students to fit the curriculum, and criticises mbo graduates: *"mbo graduates are very pragmatic. They are used to applying standard methods, without evaluation and sense of innovative methods. They have more technical skills, but they are not 'open minded' in applying and developing new skills."* However, in an mbo teacher's opinion the hbo curriculum needs changing, as it is not challenging enough for former mbo students in a different way: *"these students need more action and practice oriented learning instead of books and theory."*

Another hbo teacher not only refers to different cognitive styles mbo graduates obviously have compared to havo students, but also to the relationship between these different styles and the social background of students: *"many mbo students are from families that are not used to a more theoretical and intellectual way of thinking. And in mbo schools this type of*

thinking is not developed. Mbo schools pretend to teach theories and to develop theoretical thinking. But in practice they are focused on repetition and recall."

From August 1998 for mbo graduates the 4-year hbo programmes will be reduced to 3-year programmes[4]. This seems to be contrary to the experiences of mbo graduates in hbo according to the expressed opinions of hbo teachers. Many hbo schools were not very content with the proposed reduction. Therefore hbo courses in the technical sector together investigated the problems that (will) occur for mbo graduates in 3-year programmes. In this research project respondents from hbo schools (technical sector) were questioned about their experiences with mbo graduates in hbo courses (KPMG, 1997). One of the outcomes of this questionnaire was that in the opinion of hbo teachers mbo graduates have particular difficulties in hbo courses. Although mbo graduates themselves often feel that hbo courses, in particular the first year, in many aspects repeat what they already learned in mbo, hbo teachers think that this is only the case with respect to a small part of the programme. In particular, with respect to technical skills and knowledge in the professional domain, mbo graduates are ahead compared to graduates of general education. On the other hand, hbo teachers observe weaknesses in the knowledge and skills of mbo graduates with regard to: study skills, language skills, and theoretical/analytical thinking. The consequence of these problems was that students who started in (experimental) 3-year courses, switched to the 4-year routes during their hbo school career.

Skills and competencies of mbo graduates according to mbo graduates themselves

In this section data will be analysed with respect to the skills and competencies of mbo graduates in hbo as well as in the labour market, from the perspective of the former mbo students themselves. Wherever possible, results are compared to those of havo graduates. The data in this section are mostly drawn from the school leavers survey (RUBS). In 1996 over 26,000 school leavers participated in the survey, that takes place about a year after leaving school. The majority of the school leavers either work or have entered higher

[4] The main reason for this reduction is the increasing number of mbo students who continue education in hbo. The mbo-hbo pathway is regarded (by the Government) as a rather expensive option, because the complete track covers 11-12 years, while the havo-hbo pathway takes 9 years. The policy with regard to mbo-hbo relationships has been discussed in more detail in the Intequal national case study (Moerkamp & Voncken, 1996).

education. In 1996 almost 1,200 havo-school leavers participated in the survey, together with 7,400 mbo and over 13,300 hbo school leavers who were also involved.

Table 8 gives some general figures on the satisfaction students express with respect to the interface from their previous course and their course in hbo.

Table 8 Students' opinions on the 'fit' between their previously completed course and further education in hbo

Percentage of students by gender that evaluate 'fit' as 'good' according to: previous education	male %	female %	total %
havo	18	33	26
vwo	53	69	61
mbo	38	36	38
hbo	58	59	58
total	36	43	39

(Schoolverlaters tussen onderwijs en arbeidsmarkt (RUBS), 1996, ROA 1997)

From this table it can be concluded that the higher the level of their previous education, the more satisfied students are with the 'fit' to their current hbo course. Furthermore, female students tend to be a little more satisfied with the interface than male students.

Because mbo qualifies for work as well as for further study, it is interesting to compare the opinions of both groups on the 'fit' between mbo and work on the one hand and mbo and further education on the other hand (see table 9). Moreover, these data are compared to information provided by havo-graduates. Apparently, mbo-graduates and havo-graduates who continued their education seem to be somewhat more positive than those who started working. This goes for all sectors except for the agricultural and the health care sectors in which the opinion is reversed. It is remarkable that over the years, the opinion of mbo-graduates from technical courses on the fit between mbo and further education has become

more positive, while the opinion of graduates in agricultural and health care studies has grown less positive.

Table 9 Students' opinions on the alignment of their previous course with their current status

opinion on alignment:	alignment with further education		alignment with current job*	
	adequate/sufficient	reasonable/poor	adequate/sufficient	reasonable/poor
havo	75%	24%	68%	32%
mbo	78%	23%	70%	30%
- agriculture	60%	40%	75%	24%
- technical	82%	19%	63%	37%
- administrative/economics	75%	25%	71%	29%
- health care	68%	33%	73%	28%

(*= figures based on 1995)

(Schoolverlaters tussen onderwijs en arbeidsmarkt (RUBS), 1996, ROA 1997)

So, overall over three quarters of the mbo- and havo-graduates find the interface between their previous study and hbo sufficient to adequate, rather than poor to reasonable. Roeleveld & Babeliowsky (1996) analysed whether students with different previous training (either havo, mbo or vwo) vary in their experiences and opinions of the first year of hbo, and a summary of student evaluations is presented in Table 10.

*Table 10 Students' evaluation of hbo study after one year (mean scores)**

	previous education			
	havo	vwo	mbo	total
dedication to study	5.8	6.3	5.9	5.9
problematic interface	4.0	2.6	3.5	3.5
satisfied with hbo-choice	6.0	6.4	6.1	6.1
satisfied with learning environment	6.4	6.2	6.1	6.2

* Ten point scale from 1= absolutely not true to 10 = absolutely true. Answers to questions were then summarised into the four scales given in the left hand column. (Roeleveld & Babeliowsky, 1996)

According to their own opinion, former vwo-students seemed marginally more satisfied overall and perceived fewest problems in the interface between their previous education and hbo, while mbo-students, and particularly havo-students, were more likely to view the interface between current and former study as problematic. Mbo students in the sector health care and education (not shown in the table) tend to evaluate the 'fit' more negatively compared to students in other sectors. On the other hand, students in health care studies are the most satisfied with their hbo choice, while students of economics and language/culture are the least satisfied.

Roeleveld & Babeliowsky (1996) go on to show that, with regard to their judgement of their study skills, former vwo-students in hbo seem to value their study skills higher, havo-students lower, while mbo-students are in between. Of these three groups of students, mbo-students rate themselves the highest on the topics: 'being able to link theory and practice' and 'paper presentations'. After the first year of hbo, 37% of mbo-graduates feel they lack knowledge in certain subjects, compared to 51% of havo-graduates and 54% of vwo-students. Mbo-students mention languages, maths, physics and economics as areas where they lack knowledge; whereas havo-students mention mainly physics and vwo-students economics and physics.

As already noted in section 4, mbo-graduates are less successful in hbo than vwo-graduates, however their results are certainly comparable to havo-graduates. In the administrative and technical courses the success rate of mbo-graduates is even higher than havo-graduates. Although mbo students are as successful as havo students, they tend to drop-out more. In Table 11 reasons for drop-out from hbo-courses, according to students own perceptions, are presented. Reasons like 'chosen subjects did not match' previous study area or expectations were mentioned by only 10% of the students.

Table 11 Reasons for drop out of hbo, according to hbo students

reasons for drop out of hbo courses	male	female	total
- lack of motivation	32%	41%	37%
- preference for a different course	32%	38%	35%
- courses are not interesting	35%	32%	32%
- courses are too difficult	21%	22%	21%
- lack of self discipline	20%	20%	20%

(Schoolverlaters tussen onderwijs en arbeidsmarkt (RUBS), 1996, ROA 1997)

The Rubs-data offer some insight on aspects to which, according to students, more time should be devoted, either in havo or in mbo (see Table 12). Here we only describe aspects that were mentioned by 50% or more of the graduates.

Graduates from **agricultural courses** in mbo, who have proceeded to hbo, mention several aspects, among which are computer science, foreign languages, organisational skills and careers guidance. Those who entered the labour market would prefer more attention to be given to knowledge of conditions of employment, computer science, organisational skills, theoretical subjects and working with machines.

Graduates from the **technical sector**, who entered hbo, mention computer science, interview training/application training, careers guidance and knowledge of conditions of employment.

Those who have a job mention knowledge of conditions of employment, computer science, working with machines, interview training and theoretical subjects as aspects that need more attention in mbo.

Graduates from mbo **administrative/economic** courses, who proceeded to hbo, mention computer science, interview training, organisational skills, writing reports, theoretical subjects and knowledge of conditions of employment. Those who have a job mention computer science, knowledge of conditions of employment, interview training and practical training/work experience.

Graduates from **health care** training, who entered hbo, mention computer science, spelling skills, knowledge of conditions of employment, interview training and speech skills. Those who have a job mention knowledge of conditions of employment and interview training as aspects that need more attention in mbo.

Havo-graduates, who entered hbo, mention computer science, writing reports, practical/work experience, organisational skills, interview/application training and knowledge of conditions of employment. According to those who entered the labour market the following skills should have been paid more attention to: computer science, knowledge of conditions of employment, interview training, practical/work experience, careers guidance, organisational skills and writing reports.

Table 12: Aspects that need more attention in mbo and havo according to mbo and havo graduates

% thinking aspect needed more attention	Graduates who entered the labour market					Graduates who proceeded into hbo				
mbo-sector	Ac	Te	Ec	He	Havo	Ac	Te	Ec	He	Havo
Study skills	14	14	15	14	24	25	25	27	42	29
Foreign languages	28	30	24	36	10	50	31	23	55	16
Numeracy	22	10	19	17	21	41	37	33	35	17
Computer science	59	64	69	46	86	67	67	61	65	79
Self-reliant learning	32	33	33	31	45	27	34	39	37	45
Organisational skills	50	48	48	42	57	50	44	56	49	56
Spelling skills	16	20	28	28	33	41	37	29	56	30
Writing reports	17	26	39	45	54	44	45	54	54	58
Speech skills	19	24	40	27	38	38	39	47	47	42
Communication skills (with clients)	30	37	40	36	47	29	26	38	25	32
Careers guidance	39	49	49	46	65	44	54	58	55	48
Interview training	35	51	58	56	72	39	60	52	50	51
Theoretical subjects	50	51	43	46	46	30	27	29	38	34
Practical training/work experience	38	42	51	40	63	13	22	36	19	55
Working with machines	50	55	47	38	48	31	37	33	34	46
Workplace organisation knowledge	42	39	40	31	47	35	41	50	30	38
Knowledge about conditions of employment	61	67	68	66	80	48	53	52	51	51
Salesmanship/commercial skills	29	35	42	20	26	32	31	33	17	29
Co-operate with others	17	22	21	19	47	27	25	41	26	33
Separating main issues and side issues	24	32	29	25	31	34	28	35	37	36

Ac = agriculture, Te = technical, Ec = economics, He = health care

(Schoolverlaters tussen onderwijs en arbeidsmarkt (RUBS), 1995, ROA 1996)

Although the specific 'lists' of aspects are different for each sector and group, there are some commonalties between the groups. According to graduates, mbo should pay more attention to: computer science; knowledge about conditions of employment; interview/application training; organisational skills; careers guidance and writing reports.

Conclusions on mbo:hbo progression

In general the level of performance of mbo graduates in hbo seems to be comparable to that achieved by havo graduates, but significantly below that achieved by students from the academic pathway (vwo graduates). However, mbo graduates tend to drop out more often than havo graduates, and while havo graduates discontinuing their first course of hbo study are likely to switch to another hbo course, mbo students are more likely to discontinue their hbo studies altogether. Hence drop out of the hbo system as a whole is largely a distinctive problem of mbo graduates, although this may be partly attributable to the fact that possession of mbo has a clear labour market value.

The data about success and failure of mbo graduates in hbo are based on the performances of mbo cohorts that transferred to hbo in a situation in which not much specific attention was paid to mbo-hbo progression. Most mbo courses offered specific transfer programmes, but more systematic action with regard attainment targets, entry requirements, and mutual arrangements between mbo and hbo, have only recently come into force. The first mbo cohort that will graduate under the new attainment targets will enter hbo in the year 2000. The same applies to educational innovation strategies in mbo. Mbo schools recently started to apply new teaching methods like problem based learning, project learning, and open learning. These methods might result in a better 'fit' between mbo and hbo in future.

Some teachers in hbo are rather negative about mbo graduates. (It is difficult to reach a more definitive conclusion as, unfortunately, we only have results from small scale studies.) Their critique seems to concentrate on a set of poorly developed skills that could be summarised as 'meta-cognitive', but they also identify problems with regard to language skills and core skills in domain related subjects. One fascinating detail is that hbo teachers expressed the same feelings about havo graduates about ten years ago when the havo-hbo relationship was under discussion (van Dyck and van Asselt, 1996). There is likely to be an element of truth in the hbo teachers' complaints about the meta-cognitive skills of mbo graduates. On the other hand, as vocational pathways mbo and hbo struggle for status and recognition and, although they would never say this in public, it may be that some hbo teachers fear a decline in their own status when too many mbo students enter hbo.

Discussion about the mbo:hbo relationship has been concentrated on meta-cognition, core skills and so on. Remarkably, not much attention has been paid to the development of vocational skills and knowledge, although it is likely that mbo graduates could benefit from their advantage with respect to these skills. There are a few possible 'explanations' for this: hbo is very focused on students of the general track, and is used to students who are still open minded towards selection of a particular vocational domain; hbo still is very 'academic' (and is more interested in trying to relate to university than to mbo); and hbo fears a loss of status and position if it focuses even more on vocational skills.

We might conclude that mbo has been fairly successful in preparing students for hbo, under conditions in which preparing students for the labour market has had the highest priority. So there is perhaps a danger that paying too much attention to hbo progression might compromise the effectiveness of mbo as a genuinely double qualification, in which it was unnecessary to differentiate students in advance according to whether they were aiming at HE or the labour market. Further hbo itself is still very 'academic' (and more interested in trying to relate to university than to mbo), and giving hbo a more genuinely vocational emphasis might be another way of bridging the mbo:hbo transition (unpalatable though this may be to status conscious hbo staff), rather than always seeking to make mbo more academic.

5.3 ENGLAND

Context: development and expansion of GNVQs

Earlier work on the INTEQUAL project (Brown, 1996; Manning, 1996) gives a fuller picture of the introduction and implementation of GNVQs. The current English framework of post-compulsory and pre-higher education qualifications comprises three major pathways. The traditional academic A level route was established in 1951. The expressly vocational pathway, leading to National Vocational Qualifications (NVQs), was introduced in 1987. The third pathway, involving programmes based on GNVQs, was introduced in 1992 and is intended to straddle academic and vocational traditions. Since the launch of pilot programmes in five vocational areas in 1992/93 GNVQs have proved popular with young people, and their introduction has been welcomed by many schools and colleges (Ofsted, 1994). GNVQs now cover 14 subjects at three levels, and the size of the total cohort taking GNVQs has increased from 10,000 in 1993 to 240,000 in 1996 (Oates, 1996).

Recruitment to Advanced GNVQ programmes has expanded rapidly, and currently covers about 17 of the age cohort. Informal predictions are that the numbers taking Advanced GNVQ programmes may in the medium term stabilise at around 20 of the age cohort: a figure much less than the 50 whom it was initially thought might eventually take such programmes. One reason for this is that, while the major target group for full-time Advanced GNVQ programmes was those with four or more GCSE passes at grades A* to C, in practice the overwhelming majority of those with five or more GCSE passes at grades A* to C opt for A level provision (Brown, 1996).

Hence the de facto recruitment range is rather restricted, although many centres stated entry requirements are not always met in practice. While most entrants to Advanced GNVQ programmes come from GCSE programmes at age 16, some progress via the one year Intermediate GNVQ programmes. Recruitment then has been reasonably buoyant, but retention and completion have been much more problematic (Spours, 1995). Of the 1996 cohort fewer than 60 of the 53,527 Advanced GNVQ candidates received the full award (see Table 13). [It would be relatively rare for those with less than a full award to proceed directly to higher education].

Table 13: Numbers of Advanced GNVQ students receiving the full award in the year ending 31 July 1996

GNVQ subject area	Candidates tested	Numbers receiving full award	% receiving full award
Art & design	6501	4075	62.68
Business	22853	13682	59.87
Construction & built environment	1172	593	50.60
Engineering	571	152	26.62
Health & Social care	8343	4678	56.07
Hospitality & catering	1737	797	45.88
Information Technology	999	313	31.33
Leisure & tourism	9200	5771	62.73
Manufacturing	188	79	42.02
Science	1448	612	42.27
Pilot programmes	515	169	38.82
TOTAL	53527	30921	57.77

(UCAS, 1996a)

Extent to which GNVQ does have a genuine dual orientation towards HE and the labour market

GNVQ was expressly intended to provide the skills, knowledge and understanding of a vocational area so as to provide opportunities for progression into employment or further learning. The Advanced GNVQ is designed for entrance into higher education or employment, and so is a qualification with a vocational emphasis but a dual prospective orientation. However, many colleges drew heavily upon the traditions associated with existing pre-vocational and vocational qualifications (Spours, 1995), and saw the programmes as direct replacements for existing programmes, particularly BTEC National Diplomas (FEU, 1994), which themselves had become increasingly oriented towards progression into higher education rather than employment. For example, in 1992 almost 60 of those completing National Diploma programmes subsequently went into higher

education (BTEC, 1993). This orientation towards progression within the education system was reinforced by the many schools and sixth forms that took up GNVQ as a new venture. Overall, a majority of Advanced GNVQ students too viewed progression primarily in terms of progression to higher education or other forms of education and training (FEU, 1994).

In an important sense then GNVQ programmes were being viewed as applied general education, with the vocational orientation being downplayed (Brown, 1996). There were, however, some dissenting voices uneasy about this drift and who argued that GNVQs should have a more explicit vocational emphasis (Spours, 1995). Business and industry representatives too expressed reservations that GNVQs were not more oriented towards employment, and in particular they were concerned that GNVQs were not adequately supporting NVQs (Dearing, 1996). The Dearing Review suggested a compromise whereby: "additional units should be developed to extend the choice of units available to GNVQ students so that they and others can direct their studies more closely to particular NVQs and build up the required knowledge and understanding underpinning the NVQs" (Dearing 1996, p24). Additional units, however, remain outside the central GNVQ framework, and students would need to choose these specifically in order to get a stronger vocational emphasis.

Overall then, Advanced GNVQ programmes in practice are generally focused upon facilitating entry into higher education, while also acting as a broad general preparation for employment. Hence GNVQ could be viewed as having a pre-vocational rather than a vocational emphasis. GNVQ appears to have carved out a niche as 'applied general education', mainly for full-time students, with an orientation for the most part towards further education and training, rather than being directed towards particular forms of employment. Indeed the lack of a more explicit vocational emphasis has left room for one of the national awarding bodies (BTEC) to retain a number of its National Diploma and National Certificate programmes, that it was originally thought would be replaced by GNVQ. The much more widespread take-up of GNVQ in schools and sixth form colleges than previous qualifications in this area has reinforced perceptions of GNVQ as applied general education, although of lower status than the A level route.

Progression to higher education from GNVQ in context

Progression prospects for entry into HE have been generally quite good for those who successfully complete Advanced GNVQ programmes, with over 90 of the approximately 20,000 1996 applicants being offered a place in HE (UCAS 1996a). Most GNVQ applicants apply for courses in related subject areas, but there is variation in their prospects of getting the subject and/or institution of their choice according to vocational area; desired HE programme and type and number of additional units and/or qualifications undertaken (UCAS, 1996b). However, it should be borne in mind that large numbers of students failed to complete the Advanced GNVQ programme within two years (Spours, 1995 UCAS 1996a;), and that in 1995, slightly less than half the Advanced GNVQ cohort applied for HE through the national Universities and Colleges Admission Scheme (UCAS, 1996b). Over half (52 or 10,223 applicants) the GNVQ students applying to HE in 1996 came from the Business subject area, although applications from other subject areas have been increasing as they have become more widely available (UCAS, 1996a).

Some programmes in HE have teaching styles and assessment techniques which make transition from GNVQ smoother than others. For example, former GNVQ students may find it easier to cope with project work and continuous assessment than essays and terminal examinations. Similarly they may wish to apply to courses where there is a strong vocational emphasis and/or where tutors are used to working with students from vocational routes. Some schools and colleges and HE institutions have formalised links through HE compacts, where progression to a particular HE institution is signalled as a strong possibility (or even a guarantee if certain conditions are met) from the outset of the Advanced GNVQ programme. Students may link to the HE institution in a number of ways during the course of their GNVQ study. Such links place the emphasis on individual and curricular progression, and may diminish the extent to which the transition to HE is seen as a sharp structural 'break'. These issues will be discussed in greater detail below, but first it may be appropriate to outline some admissions tutors and HE students' views on how well GNVQ acted as a preparation for HE.

HE admissions tutors views on the value of GNVQ as a preparation for higher education

Research has been carried out into the range of skills, knowledge, understanding and personal qualities admissions tutors believe are required of prospective entrants to HE (Brown and Bimrose, 1993; Boffy et al, 1993). Admissions tutors are the 'gatekeepers' of entry into HE in that it is their decisions which determine whether applicants are made an offer of a place in HE. Brown and Bimrose (1993) investigated the views of fifty admissions tutors drawn from five broad subject areas, including two which had significant numbers of applicants from vocational education pathways: business studies and engineering. Boffy et al (1993) interviewed ten admissions tutors, including two each from business studies and engineering, in search of what they regarded as threshold competencies for entry into HE.

Business studies is a highly popular subject and one where large numbers of applicants come from vocational as well as academic routes. Admissions tutors were looking for a balance between academic and other skills. They invariably wanted candidates to be numerate and to possess a high standard of written English. They also emphasised the importance of factors such as commitment, interest and motivation; communication skills; ability to study and get to grips with abstract ideas; management of own learning; maturity and independence; relevant work experience; and understanding the nature of the course when looking at the qualities of applicants (Germon and Lagro, 1993).

Applicants from vocational education were seen as 'different' from those from the academic (A level) route. How this difference was interpreted varied. Some applied a simple 'deficit model' where they expected such students were more likely to struggle with the academic approach used in degree study, particularly if they were not used to exams and their mathematical skills were not sufficiently well developed (Brown and Bimrose, 1993, but the same point is made in UCAS, 1996a). Others argued that such students came from a different 'learning culture', but that they too had advantages: better able to work as a member of a team, more used to independent learning and project work. In the latter case, reviewing induction procedures and curriculum design more generally could make a much smoother progression for those from vocational routes. Those admissions tutors with fewer applicants to choose from were much more likely to adopt the broader view. Some admissions tutors acknowledged that, although in an

ideal world careful thought should be given to the articulation of different patterns of experience prior to entry to the degree programme itself, expediency could drive admission practices in the opposite direction. If a group had a largely homogeneous background, then not only might this make the admissions process much easier (those with high academic grades coupled with exceptional candidates from other routes), but it might also improve retention rates and mean fewer demands for remediation and additional support are made upon teaching staff.

Engineering courses had mixed popularity according to their specialism, although overall there was a shortage of applicants for engineering. There is a strong tradition of applicants from vocational as well as academic routes. Academic performance was generally seen as decisive for applicants from either route (Brown and Bimrose, 1993). Although the dearth of well qualified candidates meant that admissions tutors were likely to be looking at personal qualities, motivation and practical experience as 'reasons to accept' rather than them being used as a screen to reduce the number of acceptable candidates. Admissions tutors were particularly likely to be concerned about whether the underpinning knowledge of scientific and mathematical principles was sufficiently well-developed among GNVQ candidates (UCAS, 1996a). Some departments offered an additional foundation year for those without recent or appropriate qualifications. This was seen as evidence by one admissions tutor that "we can draw from a wider base than we ever thought possible" (Germon and Lagro, 1993). The curriculum delivery implications, however, were significant. The widely different starting points and needs of students meant that a variety of types of provision and support were required when resources were already stretched.

The research by Boffy et al (1993) highlighted the views of admissions tutors on the significance of academic skills, core skills, organisational skills and learner independence. Interestingly as the HE engineering programme was below degree level the admissions tutors did not regard any particular academic skills as prerequisites, rather attention was given to the development of skills such as the ability to research, handle abstractions, and apply scientific principles within the HE programme itself. In this case the curricular links between this programme and GNVQ provision were particularly strong: emphasis being given to organisational skills; written and oral communications; practical approaches to problem-solving; and learner independence. The business studies admissions tutors saw students

from vocational education as having certain advantages in relation to their experience of groupwork, and the emphasis given to written and oral communication skills. However, because entry to the course was competitive, the admissions tutors were also able to specify quite high levels of academic achievement too, and this ruled out many applicants from vocational education pathways. The area in which students from vocational education, including former GNVQ students, often had the most difficulty was with Quantitative Techniques (Boffy et al, 1993; UCAS, 1996a).

The overall attitude of admissions tutors towards GNVQ applicants was often mixed. The emphasis given to 'independent learning' skills was seen as in tune with the scale of independent learning now required on many HE programmes. The students' experience of the key skill areas of communication and information technology were also perceived as valuable, and an area in which they sometimes had important advantages over many of their GCE A Level counterparts (UCAS, 1996a). However, admissions tutors also had reservations about aspects of the experience of former GNVQ students, compared to students coming from the traditional (GCE A Level) academic pathway. These concerns related to their lack of experience with writing essays and taking examinations, and doubts whether they had sufficient depth of knowledge for particular HE courses (UCAS, 1996a). The major concern of admissions tutors in subject areas where HE programmes made significant implicit or explicit assumptions about prior academic knowledge was whether Advanced GNVQ students had sufficient depth of knowledge prior to entry to HE. This was particularly likely to be a problem for those students entering HE programmes with a high scientific or mathematical content, since "unless they have fully mastered certain scientific or mathematical principles they struggle on some degree courses" (p20, UCAS 1996a).

Student perceptions of the value of GNVQ as a preparation for higher education

In a section of the UCAS publication 'In their own words' (UCAS, 1996a) the comments of over 160 students, interviewed as part of a qualitative investigation, are summarised. The students considered there were strengths and weaknesses in having taken GNVQ as a preparation for higher education. Some students pointed to the effect being successful on GNVQ had had upon their self-confidence, leading to a changed self-perception of themselves as successful learners. For others, experience of a broad vocational area (and possibly of work experience in that area) had led them into decisions that they were committed to seeking employment in that area. This has had consequent effects on their motivation and commitment to HE study. These types of attitudinal effects could be particularly significant for those who had had only limited previous success on academic pathways: they had found an approach to learning that suited them, and within which they could demonstrate to themselves (and others) that they could be successful.

That the GNVQ grading criteria placed particular emphasis upon the development of 'independent learning' skills was, retrospectively, seen as a strength. The encouragement to use libraries, plan their work and assess their own work within GNVQ often helped students cope with the scale of independent learning required on many HE programmes. The students' experience in the key skill areas of communication and information technology were also perceived as a real strength, as: "the overwhelming view of Advanced GNVQ students was that they were good at presentations, group work and verbal communications, and that these skills helped them with their HE studies. Many students were appreciative of the confidence they had developed in Information Technology, citing this as a very important advantage they have over many of their GCE A Level counterparts" (p21, UCAS, 1996a).

The former GNVQ students, however, recognised that their prior experience also disadvantaged them in certain ways, compared to students coming from the traditional (GCE A Level) academic pathway. These concerns related to their lack of experience with writing essays and taking examinations, and doubts whether they had sufficient depth of knowledge for particular HE courses (UCAS, 1996a).

Advanced GNVQ students had very different experiences about what type of writing they had been asked to do as part of their course. They had invariably been asked to produce reports, but teachers' interpretations of what was required varied in relation both to content and style: some asked for purely descriptive reports, while others requested a more analytical approach, and the type of report required varied from brief synopses to major dissertations. As a consequence some students lacked experience and confidence when they found they were expected to produce essays in their degree programmes, although "those who had completed more detailed analytical reports were better able to cope with HE" (p20, UCAS 1996a).

The lack of experience of examinations was perhaps less easy to resolve, especially since "many students had opted for GNVQ courses because of the greater emphasis on continuous assessment" (p 21, UCAS 1996a). Students only experience of external testing within GNVQ was of multiple-choice tests. However, the trend within HE, particularly as a consequence of the shift towards semesterisation, has been of greater and more frequent use of examinations. Some students may have had experience of examinations in their additional (GCE A or AS level) studies, and others regretted not having overcome their examination fears prior to entering HE, but others felt that it was HE that had the wrong emphasis in placing so much importance on success in unseen three-hour examinations (UCAS, 1996a).

Whether Advanced GNVQ students had sufficient depth of knowledge prior to entry to HE varied between subject areas and was also dependent upon the nature of the specific HE programme chosen. Those students entering HE programmes with a high scientific or mathematical content were particularly likely to have wished that they had had a stronger grounding in the traditional sciences or in mathematics, since "unless they have fully mastered certain scientific or mathematical principles they struggle on some degree courses" (p20, UCAS 1996a). Similarly, some students considered that "they needed a greater understanding of the mathematics relevant to their occupational sector than they had achieved through taking Key Skills in Application of Number as part of their Advanced GNVQ. This was particularly the case for Leisure & Tourism and Business GNVQ students progressing to some of the more statistically demanding Business degrees" (p21, UCAS 1996a).

Facilitating GNVQ:HE transitions

Those Advanced GNVQ students who are successful on their programmes stand a good chance of getting into HE, but they are faced with two potential problems in negotiating their transition through to being a successful student in HE. First, they may feel there is a degree of prejudice against them when higher education institutions make offers of places (UCAS, 1996a). Second, they run the risk that they may subsequently drop out of their HE programme fairly early in their studies. To some extent this may be because they feel academically under-prepared in some respects (UCAS, 1996a), but, as with other students who do not follow the main academic (A level) pathway into HE, they may be at a relative disadvantage just because they are not from the dominant pathway (Brown, 1994). Hence there is a need to take action to try to facilitate smooth GNVQ:HE transitions. The following sub-sections outline some of the actions which can be taken to achieve that goal.

- **Addressing the 'fit' between GNVQ programmes and HE curricula**

One key element in the successful transition between GNVQ and HE is likely to be the degree of 'fit' between the two curricula. Some of the elements within an HE curriculum which may increase the likelihood of successful transition could be:

- a continuing emphasis on the development of key (transferable) skills
- small group work
- clear guidelines for the pacing of work
- a practical orientation to curriculum delivery, with a focus on problem-solving, coupled with active participation
- differentiation of the first year curriculum to build on the strengths and counter the weaknesses of those from different routes and with different patterns of experience
- availability of a foundation year for those requiring additional development in particular subject areas
- use of a range of assessment techniques
- student control of the learning process.

Conversely some courses may have not only teaching styles and assessment techniques which would make transition from GNVQ problematic, but the culture as a whole, including attitudes of staff and students, may be inimical to a successful transition from GNVQ (for example, where the prime teaching goal would appear to be a preparation for a career in research). Indeed HE institutions may become more diverse in their goals and purposes, (including some institutions having an even stronger research orientation), which will make the issue of 'fit' between pre-HE and HE curricula increasingly important.

The curricular 'fit' between GNVQs and HE is much better for some HE courses and institutions than others. So prospective HE entrants from GNVQ should be made aware of the possible importance of seeking to ensure curricular 'fit' between their pre-HE and HE programmes. Some HE curricula continue to be organised around full-time attendance, terminal examinations and in-depth study of a single subject. Admissions tutors of such courses may stress not only the ability to handle abstractions, but also the ability to handle curriculum overload. Indeed some unlikely courses (theatre studies?) are framed in such an unashamedly 'academic' way, that they seem expressly designed to 'fit' the curricular experiences of 'good' A level students. In this sense it is perhaps as well to acknowledge that the unreformed HE curriculum sometimes reflects a wish to be 'exclusive': the privileging of A level candidates being an intended rather than an unintended consequence. Applicants from other routes, including GNVQ, should, therefore, be aware that in many senses they may be 'on their own' if they apply to such courses.

Another approach to achieving a better curricular 'fit' comes from adapting the pre-HE curriculum, particularly in relation to the optional and additional units chosen from within GNVQ, and the additional studies which can be undertaken alongside it. Additional units are being developed with the explicit intention of trying to ensure that students can develop the greater depth of understanding required as a prerequisite to entry into a number of HE programmes (UCAS, 1996a). GNVQ was designed so there was also scope to take additional studies, for example an A or AS level (the latter Advanced Supplementary level being broadly equivalent to half an A level), and this may be another means of getting the more substantive depth of understanding required to start on specific HE courses. Although in practice only a small minority of GNVQ students also opted to do an A level (FEU, 1994; FEDA, 1995).

- **'Fit' with HE admissions strategy**

Even where a student has followed a GNVQ programme which 'fits' with a particular HE programme this may not be sufficient. There is also the question of whether there is a 'fit' with the HE admissions strategy. Indeed it is quite likely that for some students the acceptability of their GNVQ programme may be as much a function of the admissions tutors' lack of staff development as of what the students actually achieved on the programme. A number of admissions tutors were frank in admitting they did not possess an adequate understanding of the different types of qualifications (Brown and Bimrose, 1993), and GNVQ students felt there was prejudice against them in the admissions process (UCAS, 1996a).

The following are all likely to be associated with improved chances of entry into HE for an applicant from a GNVQ programme (adapted from Brown, 1994):

- entry criteria primarily structured around possession of skills, qualities and 'ability to benefit', with qualifications being used indicatively, rather than the prime emphasis being upon past academic attainment
- degree of emphasis given to 'other (non-A level) routes'
- marketing which highlights success of students from 'other routes'
- flexible entry criteria
- explicit access and/or franchising networks and links
- involvement in local or regional collaborative arrangements to widen access
- provision of bridging/preparatory materials to candidates who need 'strengthening' in particular areas
- availability of pre-admissions guidance
- application to an institution/course which is primarily concerned with recruitment rather than selection. [The latter often have overwhelming numbers of 'conventional' applicants.]
- experience in handling entries from vocational routes
- willingness to look at an appropriate range of evidence
- willingness to look through what has been achieved post-16 (some admissions tutors use rapid scanning of GCSE performance at age 16 as a screening device: hence they may not register at all what has been achieved on GNVQ)

- where applicants from vocational routes are particularly encouraged.

- **Evidencing achievement of GNVQ students applying to HE**

From the above it is clear that admissions tutors understanding of GNVQ students achievements may vary greatly. In any case it might be useful for GNVQ students to draw particular attention to their strengths and, when applying to institutions or courses that are very competitive, it may be as well to ensure that their UCAS application forms contain specific examples of achievement in a number of key areas. For example, evidence of an **ability to communicate** could focus upon precise descriptors of contextualised achievement relating to the possession of abilities such as being able to communicate with clarity, coherence, appropriateness and purpose (in written and spoken communications); being an effective listener; being able to work in teams or small groups and so on. Evidence of **organisational ability** could relate to effective time-management (planning and meeting deadlines); seeing tasks through to completion; and/or abilities to organise ideas and information (arguments) or activities or groups (leadership). **Adaptability in learning** could be evidenced in relation to familiarity with a range of teaching and learning strategies: enquiry based or investigative work; independent or self-directed learning; collaborative working; ability to cope with a range of teaching styles (for example, small group work and large lectures); action planning and self-review (of time, organisation and direction); and the ability to analyse processes and outcomes of learning (Brown and Bimrose, 1993).

Admissions tutors are likely to be particularly concerned with **academic skills**. Analytical skills could be evidenced by contextualised examples of an ability to think analytically; appropriate use of evidence; systems thinking; use of skills of planning and interpretation. Skills of evaluation could be evidenced through abilities to: disclose underlying assumptions and values; draw independent conclusions from a range of evidence; judge information and criticise ideas; and identify competing perspectives. Evidence should only be required of use of **some** of these skills in context. Also applicants would still be using evidence of (expected) achievement on the formal GNVQ programmes to support their application. However, making reference to tangible evidence of an individual's possession of academic skills may reassure conservative admissions staff. Similarly reference could be made to any major project or investigative work undertaken on the programme.

- **Importance of GNVQ:HE compacts**

Much of the foregoing argument about how to increase the chances of those completing GNVQ programmes going into HE could be linked to the use of compacts (or other link arrangements) between providers of pre-HE and HE curricula. The advantages are legion. The involvement of HE staff in the design (and the delivery) of the pre-HE programme as a whole can improve commitment and motivation of the young people. It can act to change perceptions; in particular, once there is the realisation that HE is a genuine possibility for them. That is, HE is not viewed as a remote possibility for other people from this route, but as a clear possible progression route for them from the outset.

The involvement with HE could take many forms: links into the HE programme through project work, 'guest' lectures or workshops, 'taster' days or residentials, shadowing HE students and so on. Student tutoring has also been used: where HE students go into schools to act as tutors to support pre-HE teaching. Such involvement can help prospective entrants get a much clearer picture of the links between pre-HE and HE curricula. At the same time, teachers may then have a clearer understanding of how they can support their students to enhance the likelihood of subsequent success in HE. The use of joint review procedures may be particularly useful in this regard.

The establishment of such links may mean that progression is geared to particular HE programmes and institutions, which are likely to be strongest within immediate localities or regions. The formalisation of such links through GNVQ:HE compacts may be thought to delimit choice (in a way that possession of three 'good' A levels does not). However, if the emphasis is upon progression, rather than gaining a generalised 'HE admissions ticket', then the linking of schools and colleges with HE becomes much more acceptable. Indeed the benefits such as the increased opportunities for franchising, foundation year support, part-time study, agreement over guaranteed 'straight through' progression routes mean that ultimate success in HE is much more likely. Direct exposure to the HE culture can also help students clarify their expectations.

GNVQ would seem an ideal programme to fit into the burgeoning schools and colleges HE link schemes. Besides the advantages in terms of broadening access of developing more

local links (because of finance, flexibility of attendance, more clearly defined progression routes), it allows a dialogue between admissions tutors and schools and colleges about the criteria for entry and expectations of entrants. This delineation of criteria and expectations would also be hugely advantageous to prospective applicants. The only apparent disadvantage of 'locking in' into regionalised HE provision would be that it might be thought to involve giving up 'automatic' rights of entry on a national basis. However, in practice entry into highly popular programmes with national entry fall into two types. Either those which make judgements upon the quality of the case made for entry (through interview, presentation of a portfolio of work and so on) or those which rely almost exclusively upon high levels of academic achievement. Entry to the former would still be possible through a GNVQ route and so would entry to the latter, although applications would likely require a special case to be made in the application, if there are relatively few applicants from a GNVQ route.

5.4 AN ANGLO-DUTCH COMPARISON OF PROGRESSION TO HIGHER EDUCATION FROM SCHOOL-BASED VOCATIONAL EDUCATION PATHWAYS

Diploma holders from long (three or four year) mbo courses have the right to enter higher vocational education, although completion of mbo does not confer any right to enter university (wo), just the higher vocational colleges (hbo). In the English system, possession of an Advanced GNVQ is increasingly recognised by higher education institutions (colleges and universities) as an acceptable entrance qualification. However, within English colleges of higher education and universities admissions decisions are largely decentralised, with the consequence that individuals will be told whether their qualifications (and possibly their performance on other aspects of the admissions process) are sufficient to get them onto particular programmes of study. In theory then, after GNVQ, students could apply for a very wide range of subjects in any HE institution.

In practice, holders of the Advanced GNVQ have in the main applied for HE programmes, with a vocational emphasis, in the 'new' universities (those that until 1992 were polytechnics). Overall then, those going into HE after completing GNVQ or mbo enter similar types of programmes in practice, even if the English students have a wider range of programmes and institutions from which to choose.

In both countries students with a vocational education background are more likely to drop out of HE than those coming from general education. Within vocational education in both systems, however, steps can be taken that increase the likelihood of students being successful when they move into higher education. These include partnership or compact arrangements between institutions from the two sectors, either at a local or regional level. Such partnerships being set up with the explicit intention of facilitating the transition from mbo to hbo, or from GNVQ to HE.

In addition to institutional links between sectors to facilitate transition, in both countries it is possible for individuals to take enriched or enhanced mbo or GNVQ programmes that can greatly affect their chances of being successful in HE. In mbo students have the right to transfer to hbo if at least 1,600 curricular hours in mbo are relevant for the proposed transfer to hbo. [Note the 1,600 relevant curricular hours have to be drawn from a total of 4,800 hours for a three year course, and 6,400 hours for a four year course.] However, students can take extra subjects offered in the optional component of the curriculum, as part of an enrichment programme, specifically aimed at facilitating hbo transfer. This almost exactly mirrors the situation with GNVQ, where judicious choice of optional units and, more particularly, additional units or studies can mean that a student is much better prepared to undertake their chosen course of study in HE.

While GNVQ can gain you entry to HE, the more substantive mbo qualification can give you advanced standing within hbo. That is, if the transfer from mbo was to a domain-related area of higher education, then your mbo study can be regarded as equivalent to 42 credits out of a total of 168 credits. The effect of this is that you could complete your hbo in three years, whereas if your mbo study was not domain-related then it would require a further four years of hbo study.

In both countries HE institutions would like to see the vocational pathway strengthened academically in order to ease transition into and through HE (Brown, Moerkamp & Voncken, 1997a). The evidence presented in previous sections showed that staff in vocational education and in higher education have a range of concerns about how well students are prepared for HE from school-based vocational education pathways. Interestingly, the problems with transitions to HE of the students from full-time school-

based vocational pathways in the two countries appear, in some respects at least, as almost mirror images.

In the Netherlands, the strong vocational orientation, with a clear focus upon entry into the labour market, and early specialisation within mbo, can create particular problems. For example, if mbo graduates in hbo found they did not like and/or were not successful in hbo, then they were very much more likely than other students to leave HE altogether. In the light of this it is significant that mbo graduates would have liked more attention within mbo to have been given to a set of skills relating to career development (knowledge about conditions of employment; interview/application training; and careers guidance). It is as if having made such an early commitment to a particular direction, these students want continuing information which will enable them to check whether this is the most appropriate path for them to follow.

The other set of skills hbo students, who had graduated from mbo, would have liked greater emphasis upon in mbo were the generic ones of information technology; organisational skills; and writing reports. This commentary from students accords well with the analysis offered by staff. While vocational skills were strongly developed, staff thought mbo graduates had weaknesses in their language skills, study skills (for example, in planning and organising their work) and meta-cognitive skills (for example, in their ability to engage in reflective thinking), as well as an underdeveloped knowledge base of underpinning academic knowledge in areas such as mathematics, science and economics.

In England, GNVQs had a much less distinct vocational orientation, being more akin to applied general education (Brown, 1996). There is debate about whether the vocational orientation should be downplayed to this extent (Spours, 1995; Dearing, 1996), but it does mean that former GNVQ students have a wider set of options for HE study than their Dutch counterparts. The former GNVQ students, now in HE, also identified that one of the strengths of GNVQ is the emphasis upon generic skills like information technology; organisational skills; communication skills and so on. Instead the former GNVQ students were likely to feel most disadvantaged by their lack of sufficient depth of knowledge for particular HE courses (UCAS, 1996a). Once again staff views aligned with those of the students. The attention given to generic skills like information technology; organisational

skills; communication skills and so on, and the emphasis given to finding out for themselves, meant that former GNVQ were, unlike their Dutch counterparts, often seen by staff as independent learners able to work well on their own. There was a similarity with the Dutch students, however, in that former GNVQ students were quite often seen by staff as disadvantaged by their lack of sufficient depth of knowledge, especially of underpinning principles and theory, for particular HE courses.

The challenge for the future for both mbo and GNVQ is to develop a substantive knowledge base, and a range of core skills/key qualifications linked to the ability to communicate, the ability to work as a member of a team, flexibility, a continuing commitment to learning and the like. This should give former students a solid platform from which to enter employment or higher education. One of the strengths of the Dutch system is the value of having an extended vocational pathway as compared to the academic pathway. This gives students more time to develop both practical skills and a substantive knowledge base, which have a genuine labour market value as well as underpinning progression to vocational higher education. This could be a valuable lesson for the English system, in which the transition into, through and out of Advanced GNVQ programmes seems unduly rushed given the scale of the task to be achieved, if students are to be adequately prepared for entry into either HE or employment. To achieve this within two years for a student cohort of generally modest achievement at age 16 appears unrealistic, and this is reflected in two ways: by the under-emphasis upon preparation for employment and in the high proportion of young people who fail to complete the full award within two years. There is an irony here though in that the Dutch government intends to shorten the overall duration of the mbo;hbo route, by reducing the standard course length of hbo for mbo graduates from four years to three. This will make it even more imperative to look for smoother curricular progression between mbo and hbo.

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List of Abbreviations

A Level	Advanced level GCE programmes
BTEC	Business and Technical Education Council
CBS	(Dutch) National Bureau of Statistics
EA	Economic/administrative mbo courses
FEDA	Further Education Development Agency
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualification
havo	(Dutch) senior secondary general education
hvo	(Dutch) vocational education
HE	higher education
mavo	(Dutch) junior general secondary education
mbo	(Dutch) senior secondary vocational education
NVQ	National Vocational Qualification
ROA	(Maastricht) Research Centre for Education and the Labour Market
RUBS	(Dutch) school leaver survey
S	Social services and welfare mbo courses
T	Technical mbo courses
UCAS	Universities and colleges admission service
vbo	(Dutch) pre-vocational education
vwo	(Dutch) pre-university education
wo	(Dutch) university education

Chapter 6

TRACING CAREERS

AUSTRIA, FRANCE AND GERMANY

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This part of the Leonardo Project INTEQUAL investigates the typical vocational and educational career paths of participants who have taken advantage of the double qualification educational routes offered in the participating countries: Germany (Bavaria), France and Austria. We understand double-qualification vocational educational courses to be paths of training which in addition to offering an initial vocational training also enable students to attain university entry qualifications. In Germany this is offered via the dual vocational system; in France by way of state-sponsored full-time educational training and in Austria as an adult school supplementary training, while students work full-time during the day. This investigation intends to determine to what extent double-qualification vocational/educational routes influence the ultimate vocational career path taken by graduates. One crucial focal point lies in the assessment of how many graduates take on employment in the business world and/or how many decide to take up higher studies.

The evaluation rests on conclusions drawn from scientific data surveys conducted in the aforementioned countries. The *German* data stem from the results of the evaluation of the Bavarian double qualification pilot project: Dual Vocational Training and Fachhochschule diploma (which for the time being will run until 2001). As of the summer of 1997 approximately 100 student participants of business-technology related professions had taken part in the pilot project and attained qualifications for admission to higher studies at a German Fachhochschule. The *French* data were derived from a 1992 survey of approximately 6000 young people who in 1990 had achieved the "Baccalaureat professionel". During 1990 around 33,000 participants had taken part, in the meantime (1997) approximately 82,000 have graduated. In contrast to the training offered to German as well as French participants, *Austrian* participants receive evening and weekend training at professional academies (WIFI-Fachakademien), while working full-time on the

job. The Austrian data we were able to include in the joint evaluation were drawn from approximately 270 utilizable questionaires (out of a total of 750) which were received by late July, 1997.

It is important to note that the evaluation also aims to determine contrasting nation-specific and cross-national results.

Within this context it should be noted that Austrian WIFI professional academies do not constitute state-administered vocational pathways, but rather comprise educational opportunities initiated by the Austrian business world and made available by and offered through private industry.

Moreover, in Germany the vocational training comprises a combination of voluntary/elective and mandatory allotments with general education oriented contents which youths participate in (within the context of initial vocational training); in France, participation is voluntary, while Austria offers a vocational/general education adult education program for "older" employees (participants, on the average, are 25 years old). Accordingly, the contents and demands placed on participants vary tremendously.
All three routes, however, hold in common the fact that participants have the opportunity of attaining not only vocational accreditation, but also the right to be admitted to an institution of higher study.

The following data collected by the committees will be examined and compared in great detail:

A. Person-specific data and evaluations upon completion of the double qualification educational program

I -Percentage of males/females and their initial vocational training route taken

II -Age at the end of/or during training

III -Previous educational degrees and/or vocational-specific training

B. Data concerning the double qualification training route

I -Causes/reasons that led to the participation in the double qualification
II -Challenges/Stress situations encountered during the program
III -Evaluation of the double qualification course
IV -Statements as to other educational routes

C. Empirical data concerning the double qualification training route

I -Degree of success in achieving particular goals and ability to make use of the qualifications and rights gained by participants through the double qualification (as of July, 1997)

Introduction: **Brief descriptions of the educational models in existence in (a) Germany, (b) France and c) Austria with an overview of the respective standard vocational school system in existence in each of these countries**

a) ***Germany/Bavaria***

The pilot project *Dual vocational training and Fachhochschule qualification (DBFH)* is a new, attractive educational route in Bavaria's vocational school sector for capable and motivated students with an intermediate educational certificate.

The pilot project offers capable students the opportunity of (within three years) completing not only their initial vocational training, but also of attaining qualifications to study at a Fachhochschule. In this way students can upon completion of these three years immediately begin their Fachhochschule studies. Like the traditionally standard vocational

route--which entails that students first achieve an intermediate school certificate, a vocational training and attend year 12 of the Fachoberschule (higher level vocational school)--the pilot project training (despite the fact that it is of considerably shorter duration) offers the very same standard instructional contents.

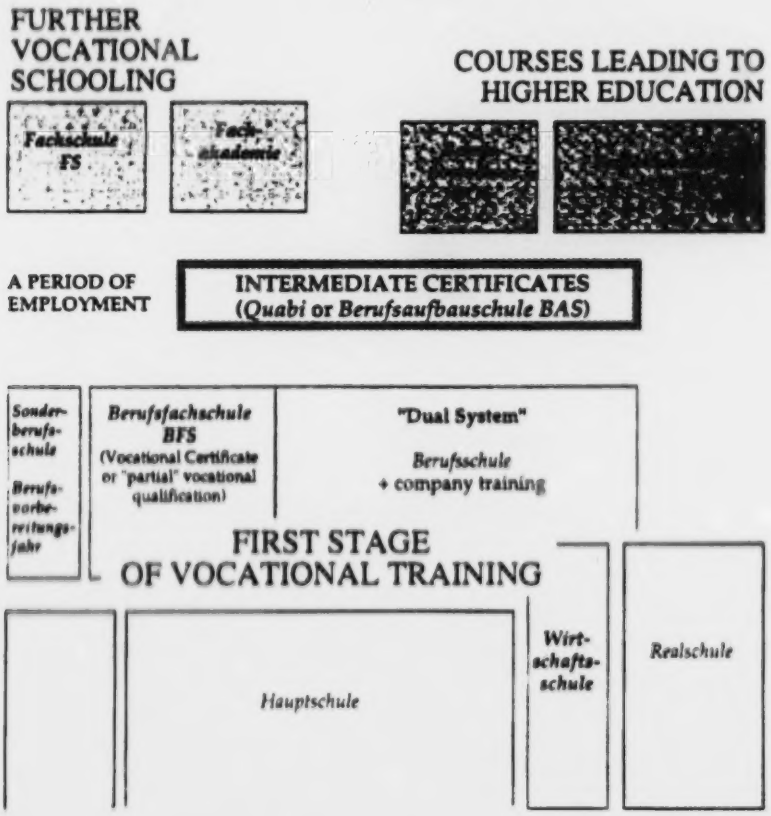
This new vocational/educational route within the dual system of vocational training takes into consideration not only the new qualifications and capabilities that mid and high level white collar employees (managers) must (in this day and age of globalization and ever evolving technological change) possess, but also the German corporate world's cry, i.e. demand, for shorter training periods.

One of the most distinguishing features of the pilot project involves the implementation of a vocational "Leitfach" as leading didactical principle (Technology/Technological Maths). This approach utilizes the scientific findings of the psychology of learning which have shown that students learn best in that they learn about a particular field or matter in its natural context, i.e. holistically (holistic learning). Furthermore, by using this vocational Leitfach principle as a means with which to relate general education, students can more quickly and easily grasp the relevance of subject matter and achieve both vocational and general educational aims. Due to the increased interlinkage, the huge potential entailed in company internal hands-on training/work experience can better be taken advantage of. This, however, necessitated the development of partially integrative curricula with cross-curricular vocational as well as general educational contents. In this way hard science/technical and general education oriented study matter were integrated into the Leitfach wherever the technical end of things allowed for content based integration. The instruction of technology now involves not only the transmission of technical know-how and understanding but also the basics of subjects such as Physics, Chemistry, Maths, Project Management as well as German, Religion and English--in a way that directly applies to the vocational field.

The concept of the Leitfach is in particular able to enhance the appeal and credibility of the vocational school system. It allows the „marriage" of vocational and general education and in this way brings together two key ingredients needed for a successful well-rounded and at the same time vocationally oriented education. The Leitfach has enabled

the integration of two school types previously kept in isolation of each other (pls. also see enclosure 1).

Diagram 1 The Bavarian Vocational School System



b) ***France***

In France the diploma with which to qualify for the Fachhochschule was created in 1985. This diploma was meant to promote interest in certain fields of employment and at the same time give graduates the chance to continue with their education.

These two targeted goals, however, entailed certain problems. The main characteristic reasons for this are listed in brief below: The "technology diploma" had already offered the same opportunities some twenty years earlier. But, continued education had become more and more general and widespread an opportunity to avail onesself of upon gradua-

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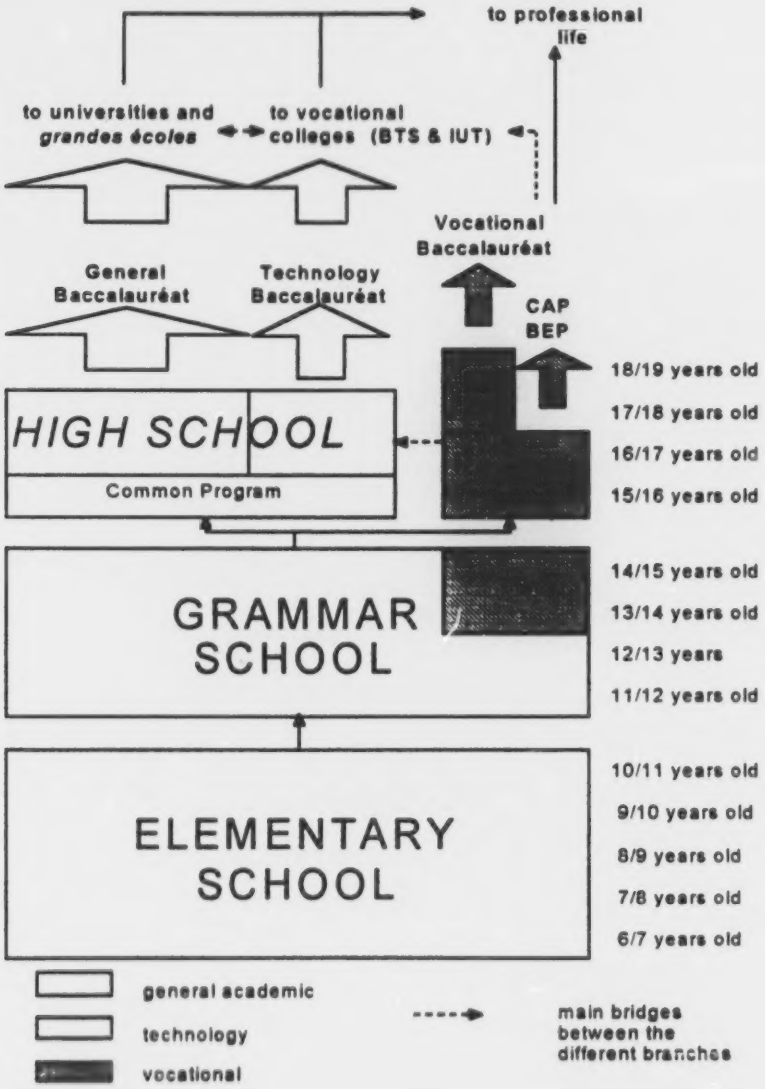
tion. Subsequently, other routes to subsequently pursue or take advantage of began to diminish in value. The vocational diploma no longer served its original purpose, and if so, only in rare cases. It had unmistakably changed into a means with which students sought to attain a qualifying university entry diploma. Evidence for this fact abounds: for one thing, the repeated new nomenclature - the original university entry diploma for technicians came to be called the „technical diploma" (and some time later the „technological diploma"); for another--the continued changes made in the curricula. Looking at these facts, the problematic question „will all these further education options not cause the new Fachhochschule diploma to lose in credib ility in an almost identical way?" naturally arises. Cereq, the "Centre d'etudes et de recherches sur les qualifications" was founded by the central French grammar and extended elementary school administration in order to investigate possible solutions to resolve this potential problem. Thus, it has become Cereq's task to research French students' further educational/career paths taken upon graduation. Segments of the most important results of Cereq's study will follow.

The Fachhochschule diploma does not have the same standing within the educational system as did the technological university entry qualification diploma at the point of its creation. The latter gives extended elementary school graduates (who had the qualification of entering long-term upper-level educational programs) the possibility of--within the framework of general and vocational education oriented grammar schools--pursuing training in highly technical vocational fields. The Fachhochschule diploma, on the other hand, gives students without upper-level entry qualifications the option of taking up a further two-year study program. These particular students who upon having graduated from extended grammar school complete an initial two-year vocational training, for the most part leading to a BEP (pls. see the overview of the French school system). This option is to be understood as a continuation of the initial vocational training completed. It is meant to enhance and give greater specification to initial training and first and foremost was created to serve segments of the labour force.

But what do graduates ultimately do with their Fachhochschule diploma? As a formal university entry qualification it legally entitles them to take advantage of the very same university opportunities as all other grammar school graduates. Does this fact, however, not tempt them to take up this last chance of continuing with their education (a route from

which they had to depart because of an early route charted on a brief and less demanding vocational training)? Do the employment options available (or not available) not considerably influence their post-graduation choice? Good chances of gaining (attractive) employment could promote students' departure from further education, while a high degree of unemployment could cause them to continue with their education. In times of high unemployment, students could well choose to pursue a more challenging vocational training in order to later secure interesting employment. All of these questions must be kept in mind while taking into consideration the following list of results.

Diagram 2 The French Educational School System



the *THREE BRANCHES* of the French educational system

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c) ***Austria***

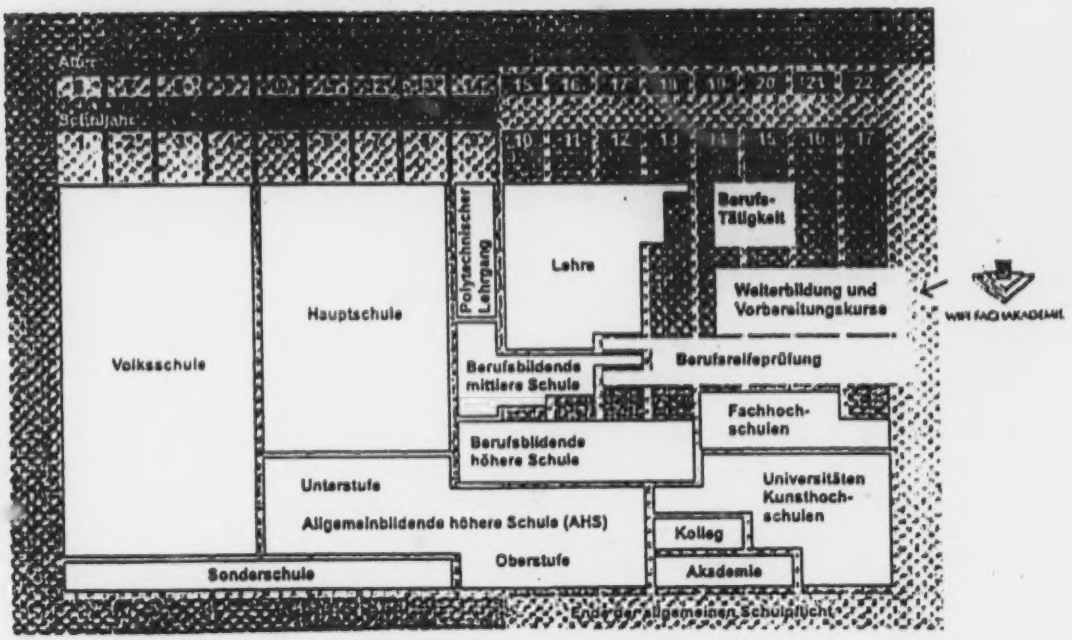
The WIFI-Professional Academies were established as vocational and general education oriented further education routes and as such are mainly meant to serve the following clientele: business administration graduates coming out of the dual system of education as well as individuals with substantial previous practical vocational experience. These educational pathways have been offered by institutes supporting the economy, i.e. chamber of commerce affiliated organizations. Such routes offer adult further educational/vocational training, since the fall of 1991 all across Austria. The vocational subjects offered span the trade-technical and business related fields. The following subject/vocational areas are offered: Business Administration; Applied Informatics (Computer Science); Accounting/Controlling; Marketing; Automatisation Technology; Production Technology; Interior Construction/Interior Design; Environmental Protection; Industrial Electronics; Tourism; Engineering/Construction Technology. After having completed six semesters of on the job accompanying evening and weekend training (a time frame within which it is possible to attain relevant mid-level certifications), the graduate ends his/her studies receiving a diploma and the title of "Fachtechniker" or "Fachwirt".

The Austrian educational system consists of pre-school, formal school education (general and vocational), apprenticeship training, Fachhochschule training, university studies and the vocational adult education program. The WIFI professional academies constitute adult education (job-accompanying) programs brought into being by the Austrian business world and intended to provide Austria's skilled workforce with higher level skills and qualifications. These double qualification (further vocational training and vocational subject related university entry admission qualification) routes have enhanced mobility within the educational system. In this way they have reduced the previously stark contrast between vocational and general education.

The WIFI Professional Academies are not integrated into the Austrian public school system as officially recognized routes of further education (pls. see enclosure 2).

Diagram 3 The Austrian Educational System

Das österreichische Bildungssystem



The first WIFI Professional Academy courses of study were offered in the fall of 1991. At that time 23 programs were available to choose from. Three years later there were 67 such study programs in Austria, as of 1995 the number of programs offered rose to 83. During the 1996/97 school year 88 pathways were already available.

While at the beginning of the study barely 40 % of all training programs were business related, today there is a balance between the technology and business related study programs which students can choose from.

Approximately 600 people all across Austria take up studies at a WIFI Professional Academy per year. From the very beginning the level of interest in the program has remained constant. By the fourth semester just about half of all participants still participate in the training. Individuals who, however, choose to drop out can take a mid-term examination after completion of their second or third semester. Six out of every ten drop-outs take this examination and are able to leave the program with a mid-term certification di-

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ploma. The business study program reports a very high percentage of such mid-level certified drop-outs.

Nearly half of all drop-outs reported a lack of time as the cause for having dropped out of the WIFI program, the second most often stated reason involved financial hardship. One third of all drop-outs reported that their professional life had become more and more significant to them than further studies.

Investigation results

The following pages comparatively exemplify the results in Germany, Austria and France, The differences between the individual national vocational/educational routes will also be focused on. To allow for a better mode of comparison the number counts are represented in percentage rates. In France these present a number of over 6000, in Austria one of approximately 280 and in Germany/Bavaria ca. 100 individuals.

To A. Person-specific data and evaluations upon completion of the double-qualification educational program

AI Male/female ratio and their initial vocational training route taken

Germany/Bavaria

Diagram 4 Percentage of students in terms of gender

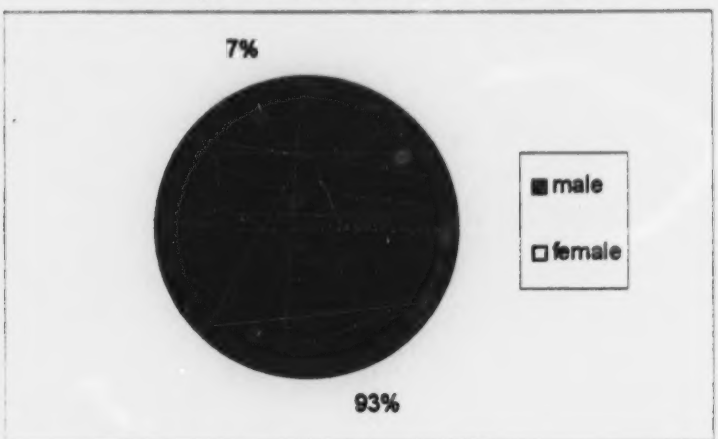
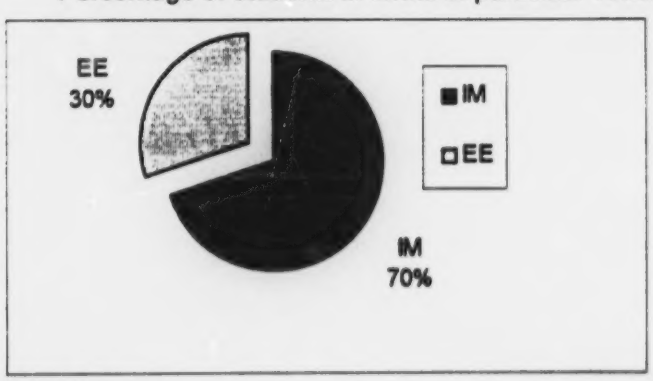


Diagram 5 Percentage of students in terms of particular vocational field



IM: Industrial Mechanic EE: Energy Electrician

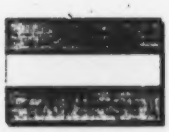
France

The participation of males and females in the program was more or less equal. This did not however hold true for the male/female distribution in regard to the particular vocational field that was chosen. The skilled worksmen and technician certification vocational training programs, for instance, show a typical overrepresentation of males. In other words, only a very small number of females participated in the trade and industry related training programs. The only exception to this rule involved the clothing and textile production program. The high percentage of women taking part in this program is, however, of no surprise, since traditionally mainly females choose to train in and enter this industry. The tertiary training programs leading to Fachhochschule qualifications bring to evidence a far less clear scenario. Some vocational subjects, such as for instance the field of sales or the transportation service sector, had a nearly equal representation of both genders. Mainly females participated in training routes such as Office Technology option A, while mostly males participated in the Fachhochschule qualifying food and beverage service industry program.

Table 1 Distribution of individuals in various vocational areas involving Fachhochschule qualification in accordance with gender

	Males	Females	Total
Public Buildings	100,0	-	100
Servicing and management of heating/air-conditioning technology	100,0	-	100
Car-body Construction and Repair	100,0	-	100
Servicing automated mechanical systems	99,2	0,8	100
Mechanical Production Technology	98,5	1,5	100
Devices for forming metals	96,2	3,8	100
Electronical equipment and installations	98,8	1,2	100
Servicing electronic audio-visual technology	97,9	2,1	100
Servicing technical office and telematic networks	98,4	1,6	100
Chemical and technical procedure industry	98,6	1,4	100
Synthetic and compound materials	97,8	2,2	100
Processed Biological Materials	31,6	68,4	100
Clothing and textile industry	1,9	98,1	100
Production technology/ wood	96,4	3,6	100
Building trade: price studies, organization/administration, project management	88,8	11,2	100
Office Technology Option A:Office Management and secretarial tasks	6,1	93,9	100
Office Technology Option B:Accounting and Office Management	33,8	66,2	100
Sales	52,7	47,3	100
Transportation industry	56,3	43,8	100
Food and beverage industry	72,8	27,2	100

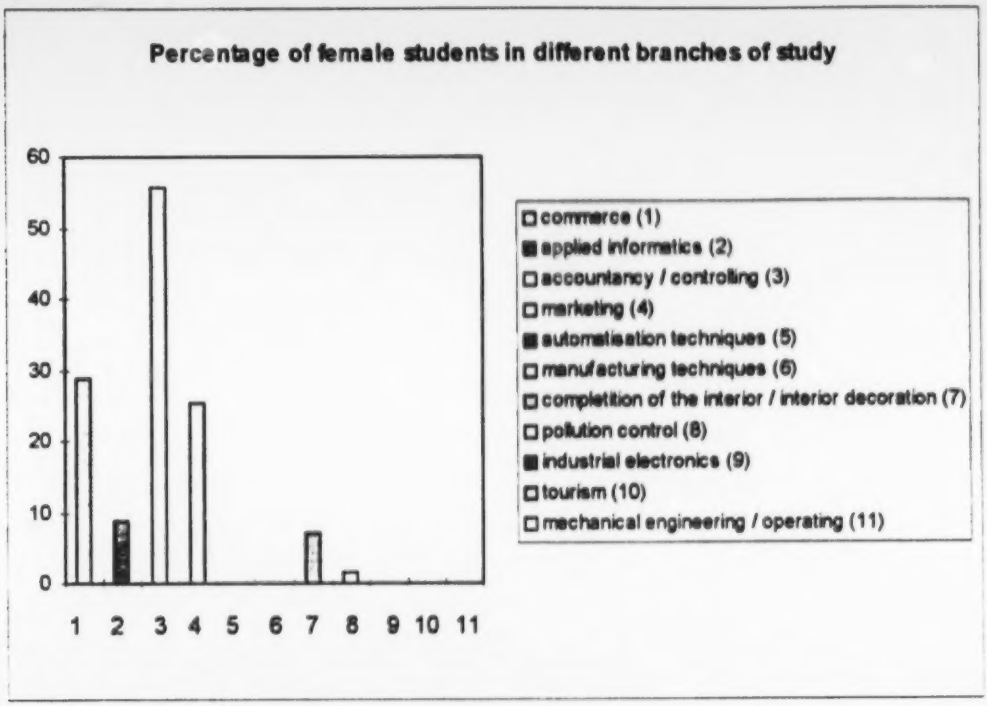
Source: Céreq/Oneva



Austria

Approximately 20% of all pilot project participants are women, whereby the percentage of female participants in large part varies in regard to particular vocational fields. To name an example in case: women constituted one half of the total of the WIFI Professional Academy's Accounting and Controlling students, one third of its Business Administration program students and 25% of the marketing students. The technical fields--such as Automatisation Technology, Production Plant Technology or Industrial Technology--had no females participants.

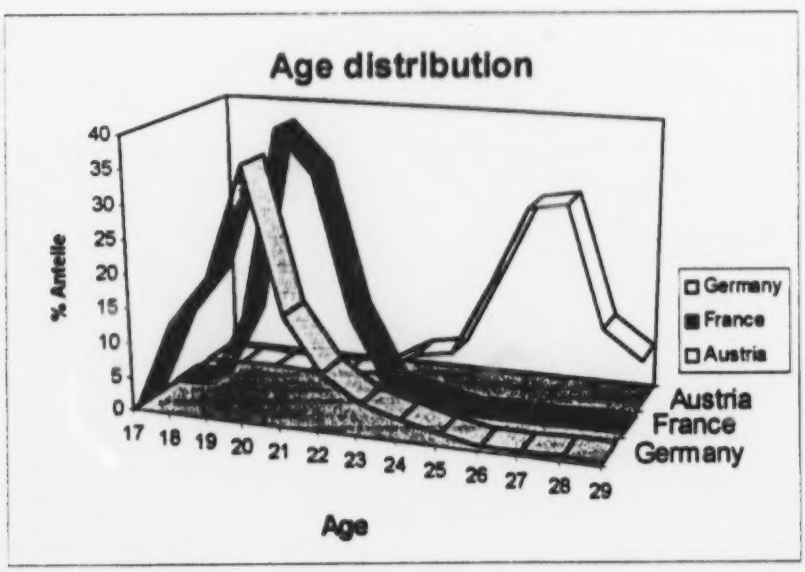
Diagram 6



All Age at the end of/ or during job training

A direct comparison of Germany, France and Austria

Diagram 7



This diagram clearly shows a differing age distribution, cause of which--as has already been said--is a result of the fact that Germany has an integrative double qualification training course directly embedded into the job training; while France has an additive program where higher academic qualification measures immediately follow vocational training; and Austria offers an adult education further training program.

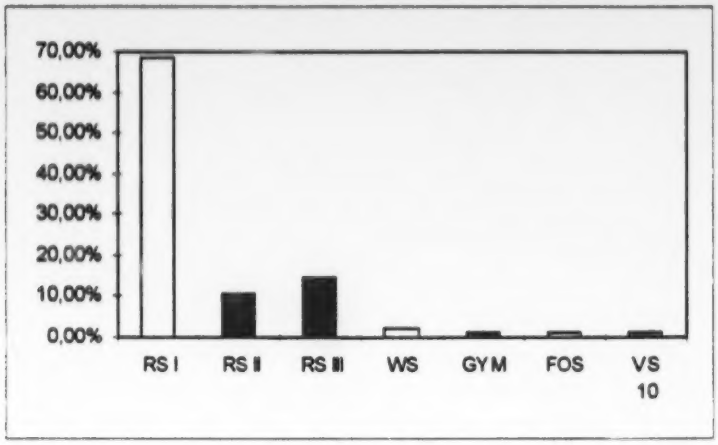
In France it has turned out that only about 10% of all students enrolled for the Fachhochschulreife were 19 years old when taking their exam. This is normally the average age at which a student (having attended a regular school program from elementary school on, without having had to repeat a school year) normally graduates. Moreover, 90% of all participants were behind schedule by **at least** one year--of these 40% by one year and 50% by two years or more. This age distribution demonstrates a fundamental and constantly recurring dynamic which trainees (who choose to pursue a technically oriented career) encounter: Namely, the fact that they generally have major problems passing general education classes--a fact that causes them to have to either repeat such courses or (as is most often the case) to embark on a vocational educational route. Of additional interest here is the finding that female participants tend to be younger than their male counterparts.

AIII Previous educational degrees and/or vocational-specific training

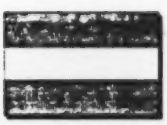
Germany/Bavaria

In order to be able to participate in the Bavarian pilot project, students must have completed the "Mittlere Reife" (a mid-level educational degree) and at least have received a grade of satisfactory (in the German system denoted by the number 3) in the subjects German, English and Mathematics. The following diagram clearly points out that most pilot project participants had completed a "Realschule" education (68%). Most of them chose to study the natural sciences.

Diagram 8 Students last educational degree in terms of percentage rates



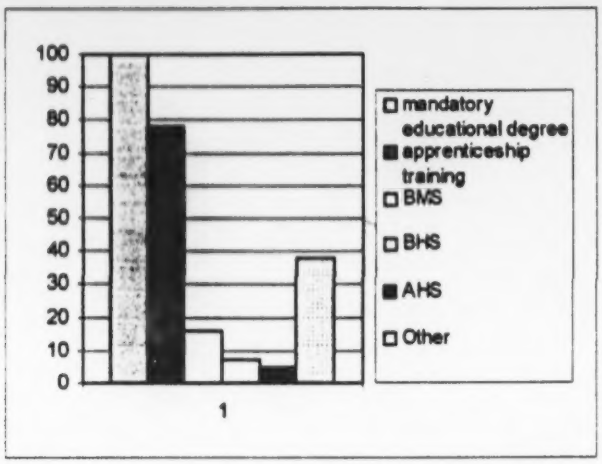
No statement can at this time be made as to the vocational subject route students took upon having entered the Fachhochschule.



Austria

The vast majority of graduates (78%) completed an apprenticeship training. Approximately, 10% had graduated from a higher level general education oriented school (an AHS) or a higher level vocational school (BHS).

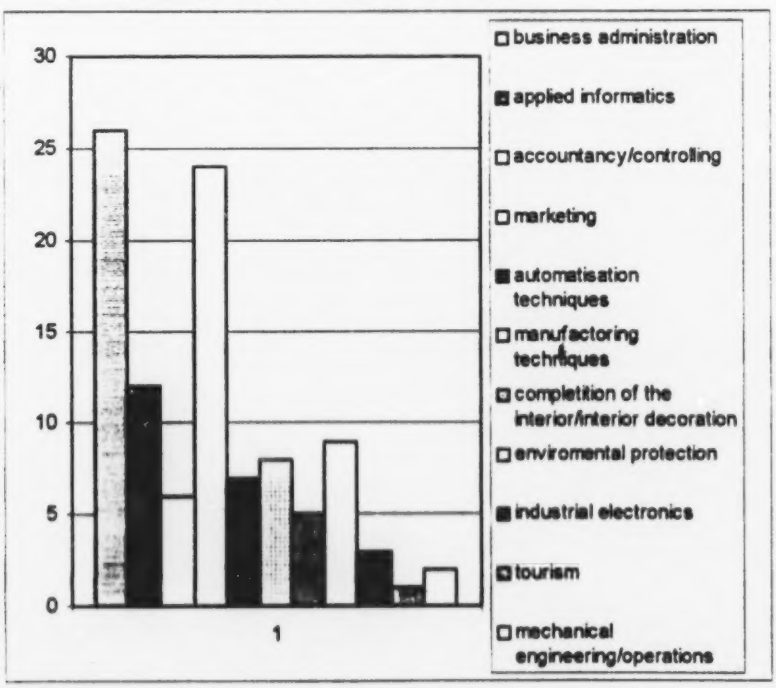
Diagram 9 What educational degrees did you achieve prior to attending the Professional Academy ?

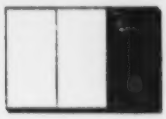


One fourth of all participants questioned reported having graduated from a business or marketing related training. 12% had successfully completed an applied informatics program.

The rest had completed other types of studies.

Diagram 10 Which academy did you choose to attend?





France

We will now focus on participants' levels of education upon entering the vocational education program. Concurrent to the 1990 launch of the French vocational educational school system, the vast majority of participants were preparing for their Fachhochschulreife at a vocationally oriented high school (Gymnasium) in connection with a Brevet d'enseignement professionnel (BEP) or a Certificat d'aptitude professionnelle (CAP). Upon comparing the vocational focus a student has taken with the particular previously attained diploma it becomes evident that 1) there is a clear relationship between the individual levels. 2) That complementary vocational educational routes are thus in existence, and that the vocational focus of the preparatory Fachhochschule qualification, subsequently, is to a very high degree determined by that of the previously attained diploma.

Table 2 Diploma obtained previous to attaining Fachhochschule qualification.

	BEP	CAP	other	Total
Public Buildings	86,3	13,8	-	100
Servicing and management of heating/air-conditioning technology	96,2	2,7	1,1	100
Car-body Construction and Repair	92,4	7,6	-	100
Servicing automated mechanical systems	90,7	4,7	4,6	100
Mechanical Technology Production	89,6	7,8	2,6	100
Devices for forming metals	91,6	8,4	-	100
Electronical equipment and installations	94,4	2,4	3,2	100
Servicing electronic audio-visual technology	96,7	1,5	1,7	100
Servicing technical office and telematic networks	91,6	4,0	4,4	100
Chemical and technical procedure industry	94,4	2,8	2,8	100
Synthetic and compound materials	94,6	3,8	1,5	100
Processed Biological Materials	77,4	22,6	-	100
Production technology/ soft materials	97,2	1,9	0,9	100
Production technology/ wood	84,8	12,3	2,9	100
Building trade: price studies, organization/administration, project management	95,8	3,4	0,9	100
Office Technology Option A:Office Management and secretarial tasks	96,7	2,6	0,7	100
Office Technology Option B: Accounting and Office Management	97,4	2,3	0,3	100
Sales	96,5	3,2	0,3	100
Transportation Industry	85,8	12,3	1,9	100
Food and beverage industry	90,0	8,8	1,3	100
Total	94,9	3,7	1,4	100

Source: Céreq/Oneva

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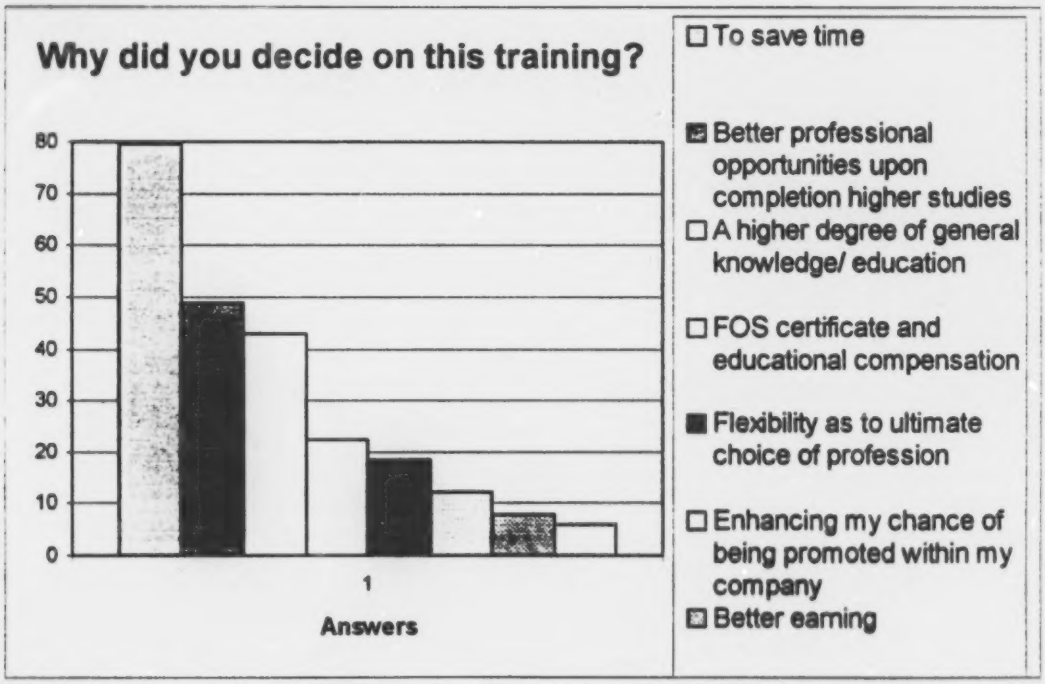
To B Data concering the double qualification training route

BI Causes/ reasons that led to the participation in the double qualification

Germany/Bavaria

In Germany and Austria participants were asked why they were participating in the double qualification vocational/educational program. Here are some extracts of important feedback received.

Diagram 11



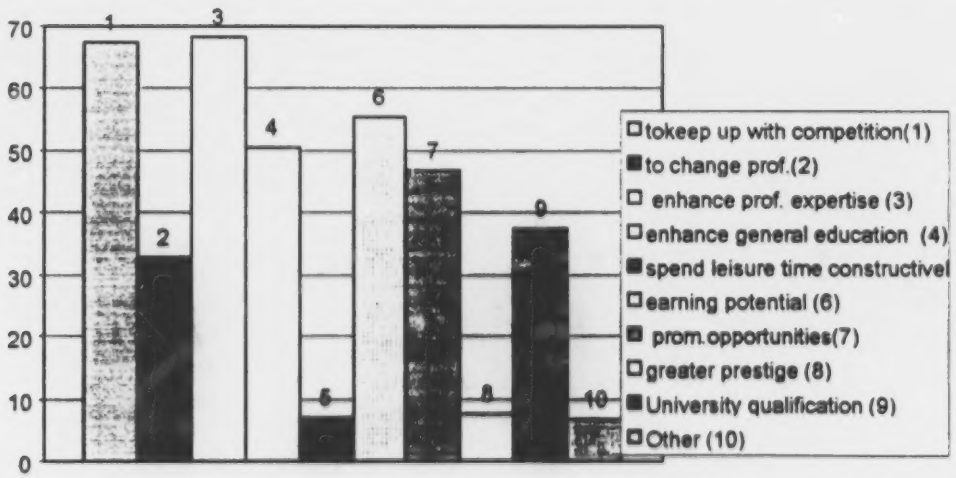
Approximately 80% of all Bavarian pilot project participants stated the one-and-a-half year time saving mechanism (compared to the length of the traditionally taken route) for obtaining higher study qualifications and vocational certification as the reason for their choice. The possibility of obtaining better professional opportunities was the second most often stated reason--given by 49% of the participants. The third most often stated reason--listed by 42.9%--involved the opportunity of attaining a higher degree of voca-

tional and general education related knowledge and the fifth, given by 18.4%, concerned the possibility of greater professional flexibility, i.e. the opportunity of later being able to change occupations.

Austria

The question "What considerations played an important role in your decision to join the WIFI Professional Academy?"-- posed in Austria-- led to the following accumulation of data:

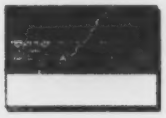
Diagram 12 What considerations played an important role in your decision to join the WIFI Professional Academy?



The most important reasons for attending the WIFI Professional Academy listed concerned the fact that students felt that they could improve their professional expertise and better their opportunities on the job market, or at their current place of employment. Further motivating factors concerned the possibility of later higher earnings and the chance of increasing their level of knowledge/education. On the average, one third of all ques-

tioned stated that university entry qualifications had been the reason that had led them to choose to attend the WIFI Professional Academy. Of those who had already begun university studies, however, only one half stated that they had been motivated by the opportunity of attaining university admission qualifications.

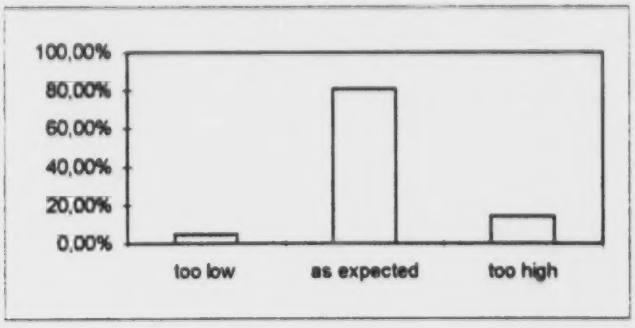
BII Challenges/stress situations encountered during the program

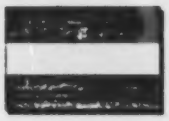


Germany/Bavaria

As has previously been pointed out, the Bavarian pilot project sought to include only participants with a high level of motivation and a good previous academic record. This selection process was carried out to enhance their chances of attaining higher study qualifications and successfully being able to complete their vocational training-- all within the shortened time frame of one and a half years. The perceptions students shared in regard to their assessment of the challenges posed by the training show that over 80% of all pilot project participants felt that their expectations had been met, while some even felt that the challenges posed had not been demanding enough.

Diagram 13 How do you perceive the demands/challenges you were faced with at your school?

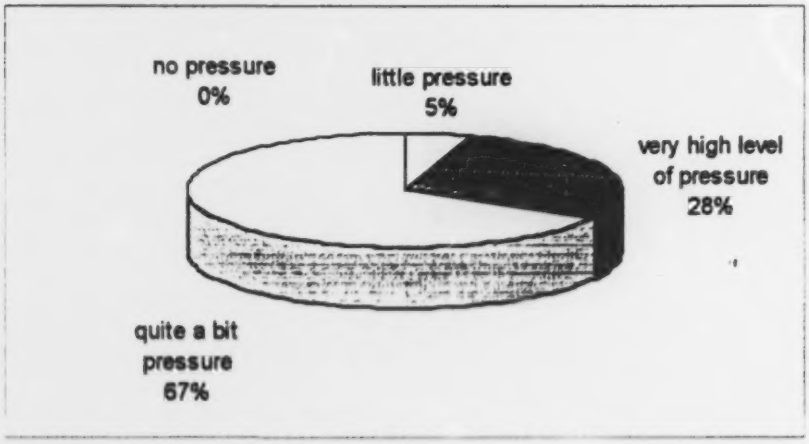




Austria

Nearly all of the Austrian pilot project graduates reported having felt too high a degree of time pressure, one third even reported having experienced a very high level of pressure and having suffered from acute stress related symptoms as a result.

Diagram 14 Time Pressure experienced while attending the WIFI Professional Academy

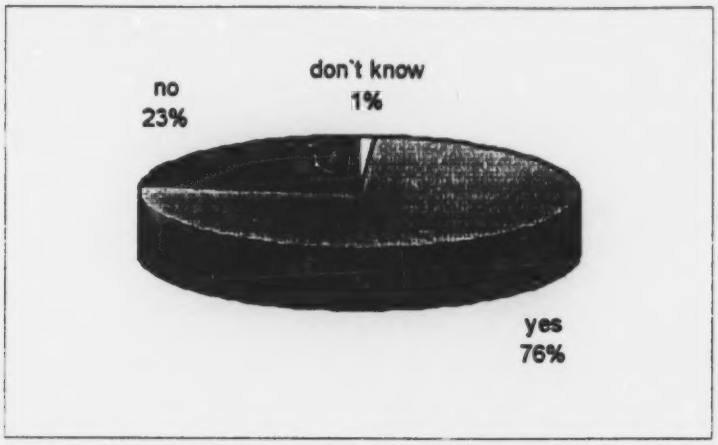


BIII Evaluation of the double qualification course

Germany/Bavaria

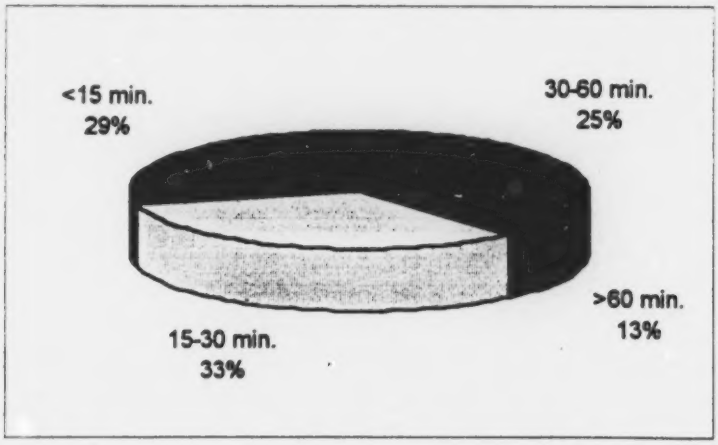
75% of all Bavarian participants reported that their experience of the program had been so positive that they would once again choose to participate in the double qualification pilot project. Those students who had reported dissatisfaction with the program for the most part admitted that uncertain future professional perspectives at their training company had given rise to their frustration.

Diagram 15 Would you based upon your experience of the program once again choose to participate in the pilot project?



Our next diagram shows that more than one third of all pilot project participants are willing to spend more than 30 minutes to commute to their particular school/training site. About one out of every 8 participants stated that they would be willing to sacrifice more than 60 minutes daily to commute to and from their site of schooling and training.

Diagram 16 Length of time students spend commuting to school site



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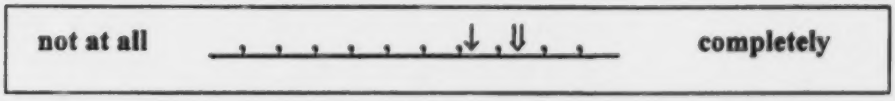
Austria

Two thirds of those questioned would again attend a WIFI Professional Academy, of those who had begun university studies even 86%.

WIFI Professional Academy graduates were also asked to indicate on a scale ranging from one to ten in as how far their investment in terms of time and money at the academy had paid off (assessment of cost-returns ratio)

Diagram 17 Do you find that your investment in time and money put into attending the WIFI Professional Academy has paid off?



Averages: Studies ⇓ total ↓

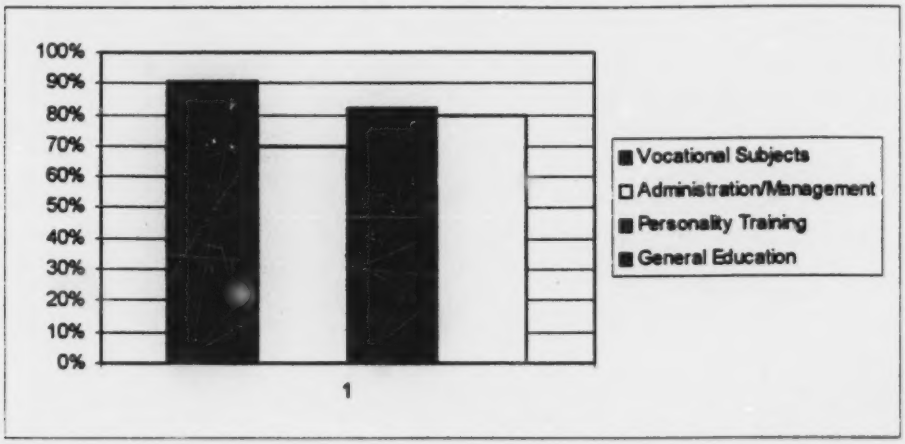
Somewhat more than four fifths (81%) of those questioned ticked the positive half of the evaluation scale--of those who had begun their university studies an impressive 94%. 42% were completely satisfied (scale levels 9 and 10)--among university students: 46%

The second question posed concerned satisfaction in regard to the subject/instruction material covered.

The subject material offered at the WIFI Professional Academy is divided into four categories:

1. Vocational subjects (e.g. Accounting, Building Construction, Production Technology)
2. Administration related subjects (e.g. Human Resources, Project Management)
3. Personality Training related subjects (e.g. communication, work strategies)
4. General Education (e.g. German, English, Maths)

Diagram 18 How content are you about the level of knowledge and capabilities you have attained?



All in all, students reported having been very satisfied with the subjects offered. Students were especially content with the vocationally oriented subjects; over one third of the participants said they were extremely satisfied. University students constituted the group that most frequently ticked the caption "very satisified" in evaluation of ***all*** four subject fields. WIFI Professional Academy's Business graduates ticked an above average satisfaction mark as to the Administration/Management and Personality training subjects, while marketing graduates ticked a high satisfaction mark. General education courses were especially appreciated by Interior Construction/Interior design and environmental protection graduates.

B IV Statements as to other educational routes

Germany/Bavaria

As of this point there are no vocational/educational programs that are comparable to our double qualification pilot project in existence. As far as the area of initial vocational training is concerned, students' only "choice" available is the traditional, additive route. In other words, students can upon completion of their initial training (taking ca. 3.5 years) attend the Fachoberschule, a one year program--since Sept. 97 in Bavaria known as the

Berufsoberschule. Or, they can, upon having gathered between two and five years of professional experience at a Fachschule (two year Technology School), take a supplementary examination. These traditional paths are the only two ways with which students can at this point obtain university (i.e. Fachhochschule) entry qualifications.

Austria

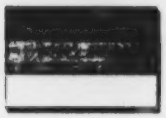
The only real alternative to attending the WIFI Professional Academy is the Fachhochschule.

In answer to the question "Which type of goal-oriented further education program would you recommend to someone who has completed his/her vocational education?" one fourth of all those questioned named the WIFI Professional Academy (24%) and 26% the Fachhochschule, 17% would recommend "Matura" routes for people working full-time, 13% named occupation specific further education courses. Less than 5% named "Werkmeisterschulen", the "Meister" examination and university courses.

To C. Empirical data concerning the double qualification training route

CI Degree of sucess in achieving particular goals and ability to make use of the qualifications and rights gained by participants through the double qualification

Germany/Bavaria



The fourth pilot project training course at the various school sites began with an additional number of 28 students in the 1997/98 school year. In total, 117 students are currently participating in the pilot project. In 1996 eight participants (all had begun the program during the first training course in 94/95) dropped out of the program in Ingolstadt. Of these eight former pilot project participants, seven returned to the traditional vocational school training route, one completed his participation in the pilot project having passed his skilled worksmen examination. Three students did not pass their Fachhochschule qualification examination. The remaining first year examination participants achieved the followed grades:

Table 3 Comparison of the Skilled Worksmen examination (Winter 96/97) and the Fachhochschule Qualifying Examination (Summer 97)

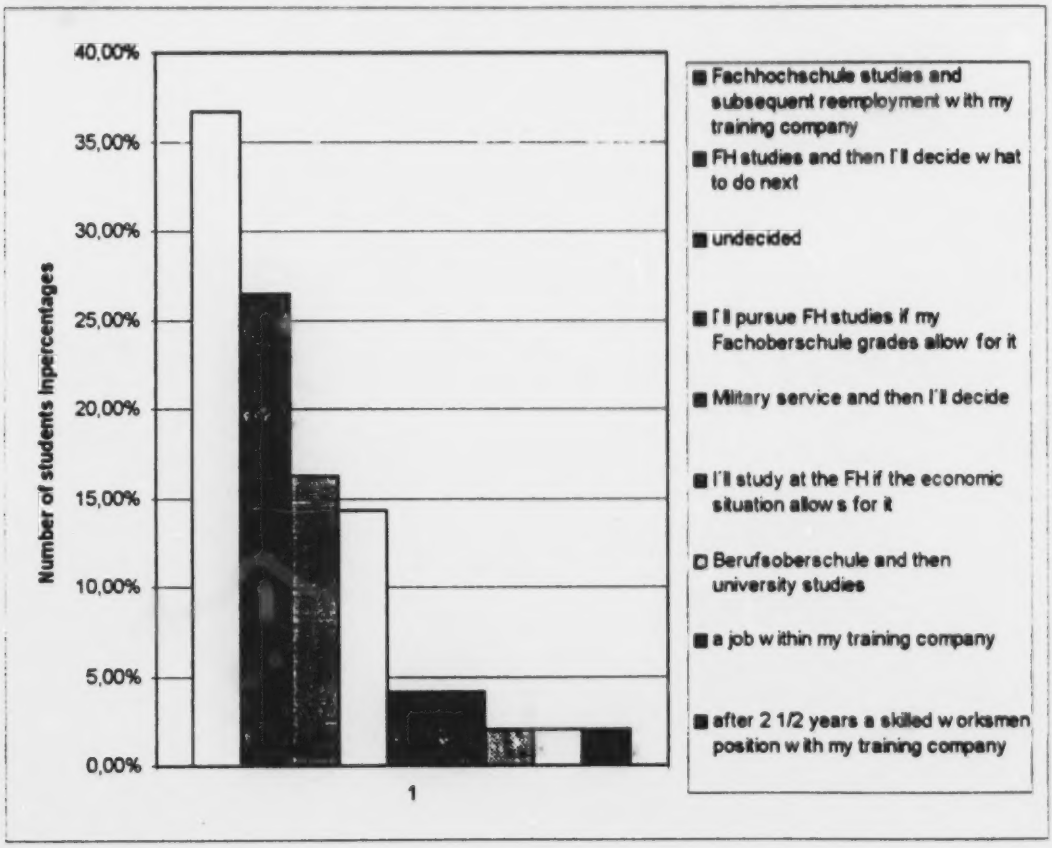
	IN-IM	DGF-IM		DGF-EE		*FHR IN*	*FHR DGF*
DBFH-Participants	2.44	2.05		1.70		*2.76*	*2.05*
Vocational Certificate (3.5) Winter 96/97	3.5	3.5		2.55			
Early Vocational Certification (RS) S 96	2.4	2.4		1.85			
Bavaria -FHR						*3.76**	*3.76**

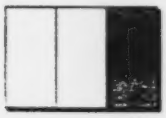
* with Mathematics (Technology), Technology/Informatics not having been taken into consideration

In lieu of the fact that the participants of one the school sites did not have the (as explained above later mandatory) necessary grade point averages, we can conclude that the pilot project's first exam year was successfully completed.

Having asked pilot project participants about their future professional goals, we received the following answers:

Diagram 19 What is the goal you plan to pursue upon completing the program?


40,00%
35,00%
30,00%
25,00%
20,00%
15,00%
10,00%
5,00%
0,00%
Number of students inpercentages
1
Fachhochschule studies and subsequent reemployment with my training company
FH studies and then I'll decide what to do next
undecided
I'll pursue FH studies if my Fachoberschule grades allow for it
Military service and then I'll decide
I'll study at the FH if the economic situation allows for it
Berufsoberschule and then university studies
a job within my training company
after 2 1/2 years a skilled workmen position with my training company



France

The fact that a large percentage of pilot project particiants had taken up university studies during the time period between 1990 to 1992 shows that continued training/education played a very important role during this time span. The following table gives us a first overview of these dynamics.

Table 4 Developments between October 1990 and October 1992

	10.90	02.91	06.91	10.91	02.92	06.92	10.92
Studies	34,2	33,0	31,2	23,7	23,4	22,3	11,6
Military Service	9,2	15,4	18,8	15,7	13,7	11,0	8,8
Job Search	14,5	10,0	6,8	11,4	9,9	8,2	17,5
Internship	0,5	0,5	0,5	0,5	0,6	0,9	1,2
Temporary employment	20,5	19,1	18,0	19,6	19,1	22,3	21,7
Permanent employment	15,1	19,2	22,2	26,1	30,8	33,5	37,4
unemployment	2,4	1,4	1,3	1,6	1,4	1,1	1,7
Other	3,7	1,4	1,2	1,3	1,0	0,7	0,1
total	100	100	100	100	100	100	100

Source: Céreq/Oneva

More than one third of all participants were pursuing university studies during the beginning of the 1990/91 school year, nearly one fourth began university studies at the beginning of the following school year and another one tenth at the beginning of the 1992/93 school year. The percentages as they stand, however, only allow for conclusions as to how many individuals had completed their university studies and when. Many students who were still studying during the month of October, 1990 dropped out of the university towards the end or during the course of the school year, while others started studying at the university in the following year. In order to get a clearer understanding of the situation, it is, thus, necessary to determine not only the circumstances as they stood at which time, but rather (beyond that) to determine the particular directions students embarked on. This is the reason why an attempt was made to establish which paths participants had taken (who had immediately begun their studies in October, 1990) during the subsequent two years. Table 5 gives us an overview of the developments.

Table 5 Routes taken by students who had begun their university studies in October, 1990

	Okt. 90	Okt. 91	Okt. 92
(1)Total	10 160	7 062	3 456
(2)University studies	9 142 →	5 397 →	2 280
(3)shift	↘	3 745 ↘	3 117
(4)uni.studies+employm.	1 018 →	655 →	187
(5)shift	↘	363 ↘	468
(6)even more students pursuing studies (2)+(4)	10 160 →	6 052 →	2 467
(7)deviation (1)-(6)	-	1 010	989

Source: Céreq/Oneva

Of the 10,160 individuals who were university students during October 1990, 6,052 were still enrolled the following year, whereas as of October 1992 only 2,467 were still enrolled (pls. see line 6, table 5). About one thousand participants didn't begin their university studies until a year after having attained Fachhochschule qualification--either because they had been drafted into one year military service or because they chose to work prior to continuing their studies. After having investigated the situations of those who had immediately taken up university studies after having attained qualifications, we arrived at the following important conclusions:

1) About nine tenths of all students focused only on their university studies: They did not have part-time jobs and for the most part were studying at a state sponsored Fachhochschule or similar kind of institution of higher learning. Nearly one tenth of all graduates chose to allign their further education with work, in that they elected to continue training in their particular field of vocational specialization or (which was more rarely the case) worked "on the side".

2)The number of drop-outs was higher during the second year than it had been during the first one. In order to better be able to understand this development, it is important to focus on the type of university studies that had been taken up.

Table 6 Type of university studies pursued in October, 1990

	Okt. 90	Okt. 91	Okt. 92
University students at:	9 142		2 280
University	1 407	731	548
IUT	209	197	79
STS	3 688	3 702	1271
a supplementary course especially for graduates	292	63	-
taking the same qualifying or another type of examination once again	2 311	233	23
other	924	413	353
undecided	311	58	6

Source: Céreq/Oneva

It is quite noticeable that a very large number of students had taken the same qualifying examination once again after they had failed during their first attempt or because they were preparing for another kind of university qualifying examination. As far as the latter case is concerned, these were participants who for the most part had hoped to achieve not only the Fachhochschule qualification, but also to pass the related technological university examination. These individuals chose this route in order to improve their subsequent chances of being able to attend a regular university. This group of former participants resembles that group who upon having attained the Fachhochschule qualification had enrolled in courses they thought would enhance their qualifications. It is exactly this kind of a scenario that constitutes one of the major challenges, i.e. problems, that confront educational experts when students graduate with the Fachhochschule qualification. Since vocational-educational "Abitur" graduates still are generally thought of as being less qualified than traditional „Abitur" graduates, they often have the impression that their qualifications will not suffice to successfully be able to complete university studies. Consequently, they often decide to complete an additional course of training prior to taking up their university studies.

Students who continued with their education immediately after graduation for the most part opted for a university program of short duration and studies that dove-tail those previously pursued. Only a few -- approximately 15% of those attending the university in October of 1990 -- chose a lengthy university program. The vast majority decided on the Brevet de technicien superieur (BTS) and only a small percentage selected the Diplome

universitaire de technologie (DUT). The Instituts universitaire de technologie (IUT - a 2 year training program) however has far more stringent admission standards than does the Sections de techniciens superieurs (STS:likewise a two year training program). If one takes a good look at those vocational-education graduates who had immediately taken up studies upon completing their last school year, it becomes conspicuously obvious that about half had enrolled in the BTS. Their chances of succeeding in these short-term vocationally oriented university programs by the way were quite good.

Table 7 Fachhochschule graduates, who had completed studies at the BTS or DUT- successful examination results two years later

		undecided	yes	no	total
DUT	no.	13	126	4	143
	%	9,1	88,1	2,8	100
STS	no.	316	1390	101	272
	%	11,6	51,1	4	0
				37,	100
				3	
total	no.	329	1516	101	286
	%	11,5	53,00	8	3
				35,	100
				6	

Source: Céreq/Oneva

More than 50% of all participants succeeded at completing a two-year university course--an exceptional achievement. We can safely conclude this, since the general success rate achieved at the BTS (one that is completely unrelated to any of the previous education training students have had) is one of barely 60%. The excellent success rate accomplished at the DUT is concerned can only be understood within the context of the fact that only a small number of students is in attendance there. The reason for this directly involves the harsh admission standards at the IUT: those vocational/educational graduates who had been granted entrance to the IUT--without exception--had entered the program with excellent academic records.

Which graduates were particularly inclined to continue with their training? This is the situation: more men chose to continue than women, younger graduates more often than older ones, and (here, however, the trend was far less distinct) service sector graduates moreso than business-technology graduates.

The following table consists of a summary of the results available to us at this time and sheds more light on these dynamics:

Table 8 Who continued with his/her educational career?

	Decided on a restricted diploma	Graduate participating in further education program; 1st year at the uni/DUT/BTS		Graduate participating in further education program; 1st year at the university		Graduate participating in further education programm; 1st year at the DUT/BTS	
	No.	No.	Entw.	No.	Entw.	No.	Entw.
total	29 570	4 944	1,00	1 309	1,00	3 635	1,00
males	15 526	2 748	1,06	556	0,81	2 192	1,15
females	14 044	2 196	0,94	753	1,21	1 443	0,84
Business sector	9 935	1 446	0,87	157	0,36	1 289	1,06
tertiary vocational sectors	19 635	3 498	1,07	1 152	1,33	2 346	0,97
between 18-20 years	14 855	2 960	1,19	772	1,17	2 188	1,20
21 years and over	14 715	1 984	0,81	537	0,82	1 447	0,80
males/business/18-20	4 015	688	1,02	73	0,41	615	1,25
males/business/21 and over	5 042	657	0,78	64	0,29	593	0,96
males/tertiary/18-20	3 174	773	1,46	231	1,64	542	1,39
males/tertiary/21 and over	3 295	630	1,14	188	1,29	442	1,09
females/business/18-20	463	57	0,74	8	0,39	49	0,86
females/business/21 and over	415	44	0,63	12	0,65	32	0,63
females/tertiary/18-20	7 203	1 442	1,20	460	1,44	982	1,11
females/tertiary/21 and over	5 963	653	0,65	273	1,03	380	0,52

Source:Cereq/Oneva

The above summary of results tell us that young men having pursued tertiary vocational training programs tend to continue with their educational career moreso than any other group of participants. Although this representative group declared a pronounced preference for university studies, they, nevertheless (like their colleagues) ended up opting for a brief two-year further education vocational course upon graduation. An especially pronounced preference for these short-term training programs--which later qualify participants for high level positions as technicians--was found among young male business-technology participants.

What was the situation graduates found themselves faced with who had as of October, 1992 not yet taken up studies (we have refered to these individuals as "direct departures")? Some continued their studies. These, however, very likely were either those individuals who had been drafted into mandatory military service or had decided to take on a job. Prior participants who had at that point in time (October, 1990) just completed their military service constituted a somewhat larger number of the "direct departures". What gives cause for concern are not the situations of the participants described above, but rather the number of participants who at that point were still unemployed and looking for jobs. More than 17% of all participants were faced with that predicament--those who then were in the process of completing internships should probably be included in that count. Important to point out, however, is that more than 72% of all graduates did have a job. Of the different types of employment contracts (temporary or permanent) held by these 72%: nearly 49% had a permanent employment contract, while somewhat more than 23% held a temporary one. The relative lack of job security one would assume this latter kind of contract brings with it, however, also needs to be seen from the following angle: A temporary contract provided at the beginning of employment can in many cases lead to later permanent employment (i.e. a permanent contract). Table 9 summarizes these results and differentiates these in accordance with the particular vocational/educational Fachhochschule degree achieved, i.e. whether a business/technology or tertiary diploma was achieved and in one or another way effected the varying situations graduates later found themselves in. Upon careful examination of these differing set of circumstances we can conclude that business/technology graduates face a lesser risk of unemployment than do tertiary field graduates.

Table 9 The situation of "direct departures" from October 1990 to October 1992

	Business related fields		Tertiary fields		Total	
	No.	%	No.	%	No.	%
full-time university studies	79	1,10	280	2,08	359	1,74
military service	762	10,64	513	3,82	1 275	6,19
job search	850	11,87	2 732	20,33	3 582	17,39
internship	128	1,79	139	1,03	267	1,30
the total number of those employed	5 287	73,81	9 553	71,10	14 840	72,04
of these: temporary employees	1 644	22,95	3 174	23,62	4 818	23,39
of these: permanent employees	3 643	50,86	6 379	47,48	10022	48,65
unemployed	57	0,80	219	1,63	276	1,34
total	7 163	100	13 436	100	20 599	100

Source: Céreq/Oneva

Table 10 gives us an initial overview of the type (and quality) of jobs held by so-called "direct departures" (who had left the program in 1990) in October 1992.

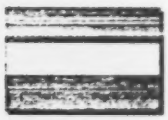
Table 10 Classification of jobs held by "direct departures" in October 1992

	Business fields		Tertiary fields		Total	
	No.	%	No.	%	No.	%
undecided	403	7,62	466	4,88	869	5,86
craftsman, business man/woman, supervisor	14	0,26	26	0,27	40	0,27
managers, higher level academic positions	20	0,38	10	0,10	30	0,20
mid-level positions	834	15,77	1 229	12,87	2 063	13,90
of these: technicans	626	11,84			626	4,22
white or pink collar employment	532	10,06	7 176	75,12	7 708	51,94
blue-collar workers	3 484	65,90	646	6,76	4 130	27,83
of these: qualified workers	2 554	48,31			2 554	17,21
of these: unqualified workers	915	17,31			915	6,17
total	5 287	100	9 553	100	14 840	100

Source: Céreq/Oneva

Whereas tertiary training graduates for the most part held white or pink collar jobs, which was the case for 75% of all, two thirds of all business/technology graduates held blue collar jobs.

Although most of these were hired and classified as qualified blue collar workers, quite a few of their colleagues had great problems getting vocational/educational qualifications recognized. These problems caused them to be employed in low level and/or poorly paid jobs or not to find employment in their area of competence. At this point we must however point out that for a good many of business/technology graduates the investment in education had paid off in helping them attain employment in mid-level positions.

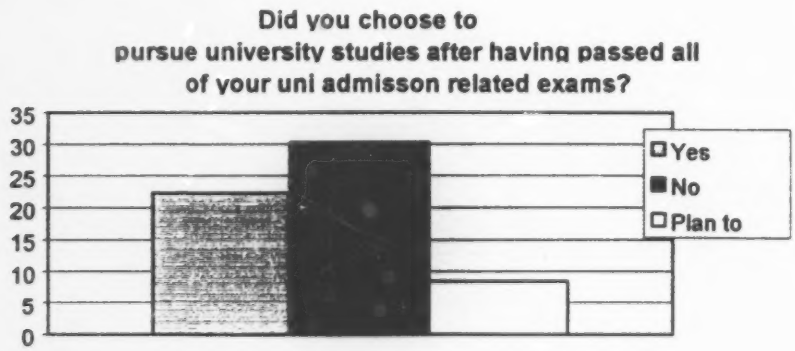


Austria

WIFI Professional Academy graduates have two options at their disposal: they can either begin university studies upon having achieved their admission certication or they can continue working. Whereby, for those choosing to continue to work, attendance at the academy allowed for some rather interesting new career opportunities and/or developments.

60% of all graduates questioned passed their university admission exams; 22.5% had begun university studies; 9% were seriously thinking about attending the university in the near future.

Diagram 20



The percentage of those graduates who had passed their exams increased from 57% in 1994 to 66% in 1996. The development of the number of those studying at the university, on the other hand, was a non-linear one: 25% in 1994, 26% in 1995 and 28% in 1996.
Accordingly,

On the average, women take the qualifying exams more often than men do. This phenomenon must, however, be seen within the context of the particular vocational direction that was taken. Those vocational directions pursued by more female than male participants--namely: business, controlling and marketing--generally account for those fields where a greater number of students take and pass their exams.

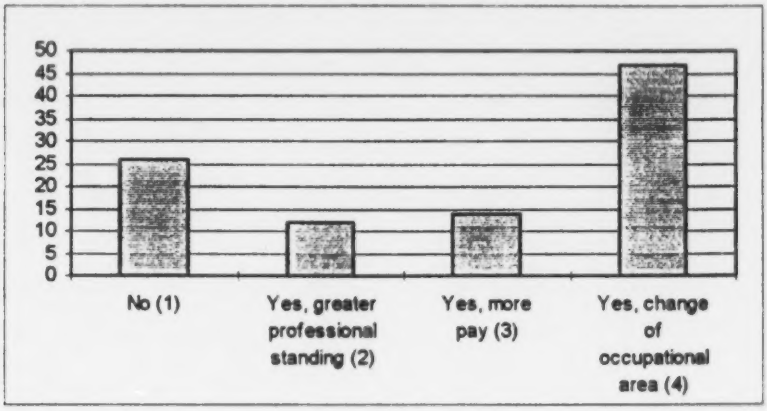
60% of all questioned enroll in business related university studies (business administration, marketing); approximately 25% take up technology or natural science related studies; about 15% took up unrelated study fields (humanities/soft sciences, law studies).

Those who had attained university admission qualifications, but did not plan to attend the university named the following reasons for their decision: Lack of time, financial problems, no professional advantages in sight, too much theory, doesn't fit into career plans, family related circumstances.

Professional Developments

For the most part, 74% of those questioned reported that their graduation from the WIFI Professional Academy had helped them realize professional changes for the better.

Diagram 21 Did your attendance at/graduation from the Professional Academy result in advantageous professional developments?



Nearly half of those questioned (46%) experienced a shift into new areas of responsibilities, this change mainly involved a promotion to the managerial, assistant managerial, departmental managerial, general managerial level or responsibility for a new domain, such as environmental technology, marketing, computer software or sales. Some opened up their own businesses.

An above average number of marketing, automatisation technology, production technology and interior construction/interior design graduates stated that positive career changes had manifested for them.

All in all one approximately one out of ever six reported that they were now earning a higher salary; of the controlling, automatisation technology and interior construction/interior design graduates it was one out every five.

One out of three "controllers" stated that their graduation from the Professional Academy had given them far greater job security.

Interestingly enough, it is not possible to arrive at a clear distinction between those who chose to remain in the world of work and those who chose to attend the university. This phenomenon can only be explained in light of the fact that the vast majority of graduates choose to pursue university studies while at the same time continuing to work.

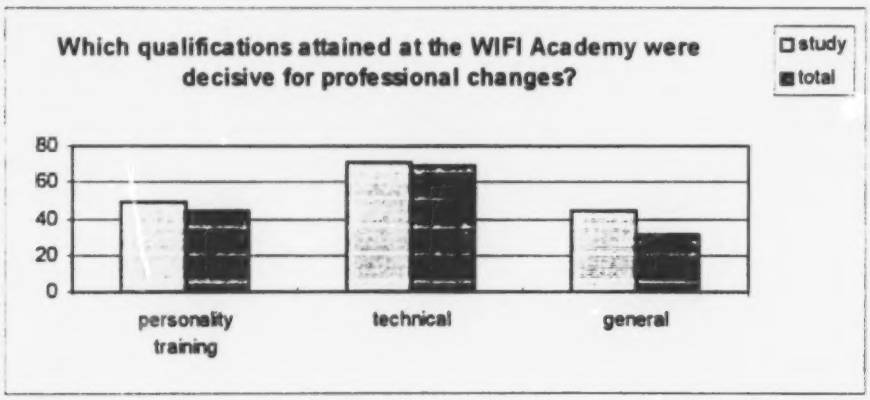
Change of workplace

Somewhat more than half (54%) of those questioned did not change their place of work, one out of every five switched to another company during their training period, and one fourth upon completion of the WIFI Professional Academy. Those who had attained university entry admission qualifications changed their place of work 7% more often than the remainder as quite a number had begun full-time university studies. Those who decided to open up their own business constituted 25% of those having left their previous company.

Qualifications which were of particular importance for the professional change for the better

Two thirds of those questioned stated that their enhanced vocational knowledge had been the main factor for their better professional standing. Four out of every five questioned found that the personality training had been particularly helpful and one third named the general education as having been pivotal for the change for the better.

Diagram 22



Because the questionaires specificially allowed for more than one answer per question it was possible to determine that those with university admission qualifications had found that they were able to make use of ***all*** of the knowledge and skills that they had gained during the training. Beginning level university students, in particular, were far more

greatly able to make use of the knowledge they had acquired in the general education related subjects.

Conclusion

In summary we can say:
The new double qualification educational/vocational routes fit the needs of the tide of our time and are increasingly in greater demand in all partner countries. In France, most youths have completed their initial vocational training. All vocational/educational programs further the vocational and general educational qualifications and thus the professional mobility of their participants.

75% of all German and two thirds of all Austrian graduates would again choose to participate in such up-to-date training programs--of the (now) university students: a striking 86%. These numbers speak for themselves. We conclude by saying that little, if anything, else needs to said.

SUMMARY

Within the framework of the Leonardo project „Qualifications with a dual orientation towards employment and higher education - INTEQUAL" the team of Germany (Bavaria), France and Austria is tracking the career paths chosen by participants, who have attended educational institutions leading to dual qualification certification.
This study intends to determine to what extent double-qualification vocational educational routes influence the ultimate vocational career path taken by graduates. One crucial focal point lies in the assessment of how many graduates take on employment in the business world and/or how many decide to take up higher studies.

The evaluation rests on conclusions drawn from scientific data surveys conducted in the aforementioned countries.
The *German* data stem from the results of the evaluation of the Bavarian double qualification pilot project: Dual Vocational Training and Fachhochschulreife (which will run until

2001) . Up until the summer of 97, approximately 100 participants studying business-technology relatedl professions will have participated in the pilot project, qualifying them also for admission to higher studies at a German Fachhochschule.

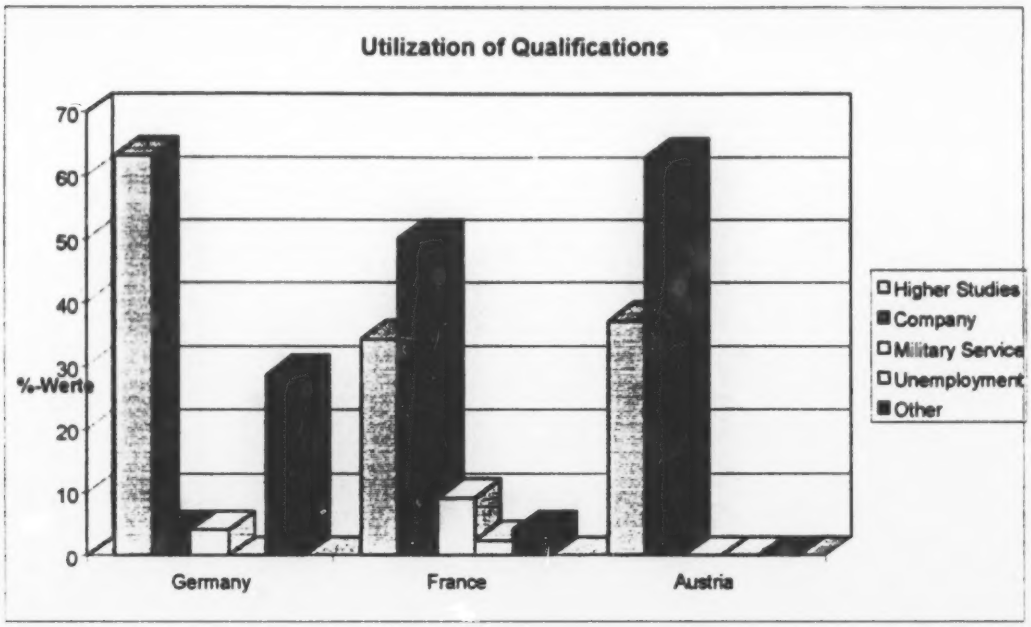
The *French* data derive from a 1992 survey of approximately 6000 young people who in 1990 had attained the "Baccalaureat professionnel". During 1990 around 33,000 participants had taken part, in the meantime (1997) the headcount reads approximately 82,000.

In contrast to the training offered to German as well as French participants, *Austrian* participants receive evening and weekend training at WIFI-Fachakademien (professional academies) while working full-time on the job. The Austrian data we were able to include in the mutual evaluation were drawn from approximately 270 usable questionnaires, received as of July, 1997 (from a total of 750 graduates). The evaluation also aims to determine contrasting nation-specific and cross-national results. Important to keep in mind here is the fact that the Austrian WIFI-professional academies do not constitute state-administered vocational pathways, but rather comprise educational opportunities initiated by the Austrian economy and made available by and offered through private industry.

In France, participation is voluntary, in Germany the situation comprises a combination of voluntary/elective and mandatory allotments, which youths participate in (within the context of initial vocational training), while Austria offers a vocational/general education adult education program for "older" employees. Accordingly, the contents and demands placed on participants in part vary tremendously.

All three routes, hold in common, however, the fact that participants have the opportunity of attaining not only vocational certificates, but also a higher study entry qualification.

How do participants of double qualification educational pathways utilize the vocational certification and/or higher studies qualifications upon completion of the national training course?



63.2% of German participants wish to pursue higher studies. Of these, 36.7% subsequently intend to return to their original training company as a diploma'd engineer. Only 4% of the participants with university qualification return to work without having completed higher studies (for the most part to their original training company). None of the Bavarian participants have, however, had to deal with unemployment because training companies have agreed to guarantee reemployment. 4.1% were drafted into military service with the "Bundeswehr" upon completion. Those participants (here: 28.7%) who had not yet made up their minds upon being questioned are included under the caption of "other".

The results in France and Austria are somewhat different. First, let's turn to the situation in France. There, only 34.2% had taken up higher studies in 1990, 50.1% returned to their original place of employment, 9.2% were forced or wished to join the French military service, and 2.4% were faced with unemployment. In 1992 the number of university stu-

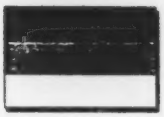
dents suddenly dropped to only 11.6% and 76.6% were employed. This trend has to this day not changed. The reasons for this development could for example lie in the shaky French labour market and insufficient qualifications for subsequent higher studies.

In Austria only 37% of all graduates make use of their university eligibility, the vast majority continue working at their company -cause for this sure enough being that their training had been job accompanying. Those who had passed their university entrance examination, but did not proceed to take up studies, listed the following reasons for their choice: Lack of time; no professional advantages in sight, too theoretical; doesn't fit my career planning, family-related reasons.
Nonetheless, however, professional changes manifested for 74% of all questioned. Nearly half changed their levels or areas of responsibility, which for the most part entailed being promoted to a position as department head, assistant manager, branch manager, manager or taking up a new sphere of responsibility, such as for example environmental technology, marketing, computer technology, sales, etc.
One out of every six graduates were able to improve their financial standing. For somewhat more than half (54%) of those questioned this did not necessitate a change of employers.
Also quite interesting to note is the fact that Austrian women on the average passed their university qualification exam more frequently than their male counterparts did. This fact however must be carefully regarded within the context of particular fields of study -since fields with a higher percentage of women than men (such as for example, commerce, controlling and marketing), generally account for a greater percentage of participants taking and passing their examinations.

To sum things up it has become clear that these new double qualification routes are very much up-to-date and more and more in demand all across Europe. They enhance participants' professional and general-education related qualifications and as a consequence their professional mobility.

75.6% of all German and two thirds of all Austrian participants questioned would once again choose to attend such up-to-the-minute educational courses -in fact of those who had begun university studies, even 86%.

Enclosure 1



Deutschland/Bayern

Daten zum Modellversuch

Bezeichnung:

Duale Berufsausbildung und Fachhochschulreife (DBFH)

Land:

Bayern

BLK-Nr./BMBW-FKZ:

B J 94.10.Drs.Nr. 3 / K 0679.00

Der Modellversuch wird aus Mitteln des Bundesministeriums fur Bildung und Wissenschaft sowie des Bayerischen Staatsministeriums für Unterricht, Kultus, Wissenschaft und Kunst gefördert.

Laufzeit:

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Projektträger:

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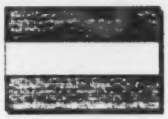
Enclosure 2



Österreich

Daten zum Projekt

Bezeichnung:

WIFI-Fachakademien

Land:

Österreich

Laufzeit:

Seit 1991 - laufend

Projektträger:

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Wirtschaftsförderungsinstitute (WIFI)

Wissenschaftliche Begleitung:

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Chapter 7

WHAT THE AUSTRIAN PARTNER LEARNED FROM THE PROJECT INTEQUAL

Monika Thum Kraft

Position of the WIFI Academies within the Austrian system of education

In Austria approximately every tenth general higher secondary leaving exam (= Matura) is taken in second chance education (evening classes, add-on courses, external examinations, university admission exams, vocational final exams for university admission). From these ten percent another ten percent are taken at the WIFI Academies, which means that one percent of all matriculation examinations of one year are passed at WIFI Academies. It may therefore be inferred that WIFI Academies have been well accepted as a further alternative of the educational system and will also be accepted in future (the number of graduates has been a regular 300 per year), but this new way of education has not yet influenced the Austrian educational system as a whole to a great extent and has not caused an eminent change in the mainstreaming towards the particular ways of education - quite contrary to most other INTEQUAL models.

The variety of systems in Europe

Further education of skilled workers in the framework of the WIFI Academies in comparison to all other models (except Bac Pro) is a model of advanced training and not of primary education. In spite of various possibilities of double qualification of skilled workers in the European countries, results show a way for comparison by trying to see the particular model in the context of all the others. The aim cannot be an equalization of all systems. The Austrian position, that the dual system of apprenticeship as an initial training for skilled workers has many advantages but teaches only technical knowledge, is verified. Further general knowledge is frequently imparted in another context or in the framework of measures for advanced training. Proposals for a parallel imparting of both technical and general contents may be found in the German and Dutch models and

possibly also in the British scheme. First steps in this direction have been taken in Austria this autumn by introducing a vocational matriculation examination.

Unison of endeavours

Disregarding the different ways of embedding of the INTEQUAL models into the particular national educational systems a resemblance of methods and aims stands out.

In fact, all INTEQUAL models emphasize application oriented learning, self-training, learning-by-doing etc. as a distinctive feature of double qualification.

Many subjects contained in the education, like imparting and training of key-qualifications, may be encountered in all countries.

Limits of integrating vocational and general education

It appeared in the course of the project that it is often difficult to find the balance between technical and general contents. Therefore frequently one field was stressed more, e. g. in Holland the technical contents, in England the general. The limits of twofold oriented training are reached here especially in initial education. Furthermore there is the danger of an equalization of formerly separate training courses - vocational and general education - and their reduction into one educational way. Therefore the Austrian way of presenting this training as further education is a possible alternative, since the present varied offer of chances for training which supports the differing abilities of the pupils must by no means be deminished.

System of trainer-coaching

From the Norwegian system of trainer-coaching Austria might take over some stimulating efforts like pedagogical training.

Equivalence of terms in the European Community

Despite concentrated concern with the terms "vocational and general education" and "higher education" in the course of this study it must be stated that within the educational systems of the various countries the meaning of these terms differs more or less. It must therefore be concluded not to aim at an equivalence of these terms but to attempt an

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understanding of their meaning within the context of the educational systems of the countries in particular.

Studies versus exchange of literature

The aim to work out a transnational study together leads to a much more intensive confrontation with the systems of education of the partner countries and their embedding into historically grown structures than a mere comparison based on literary research. Thus a common study produces results of a greater directness. Above all it is much easier to evaluate the possibilities of transfer of certain aspects of a training course into that of a different country.

WAS WIR ALS ÖSTERREICHISCHER PARTNER AUS DEM PROJEKT INTEQUAL LERNEN KONNTEN

Monika Thum Kraft

Position der WIFI-Fachakademie im österreichischen Bildungssystem

In Österreich wird etwa jede 10. Matura auf dem zweiten Bildungsweg (Abendlehrgänge, Aufbaulehrgänge, Externistenprüfungen, Studienberechtigungsprüfungen, Berufsreifeprüfungen) erworben. Von diesen zehn Prozent werden wiederum 10% der Abschlüsse an den WIFI-Fachakademien gemacht., d.h. somit, daß ein Prozent aller Reifeprüfungen eines Jahrganges an den WIFI-Fachakademien abgelegt werden. Daraus ist zu erklären, daß die WIFI-Fachakademien als weitere Alternative des Bildungssystems gut angenommen wurden und weiterhin auch angenommen werden (die Absolventenzahl von 300 pro Jahr ist stabil), daß jedoch andererseits dieser neue Ausbildungsgang bis jetzt das österreichische Bildungssystem als ganzes nicht wesentlich beeinflußt hat oder deutlich Veränderungen im Zustrom zu den einzelnen Bildungsgängen verursacht hat - im Gegensatz zu den meisten anderen INTEQUAL-Modellen.

Die Systemvielfalt in Europa

Die Weiterbildung von Facharbeitern im Rahmen der WIFI-Fachakademien ist gegenüber den anderen hier vertretenen Modellen (außer Bac Pro) ein Weiterbildungsmodell und kein Erstausbildungsmodell. Trotz der vielfältigen Möglichkeiten einer Doppelqualifizierung von Facharbeitern in den Ländern Europas zeigen die Ergebnisse, daß es möglich ist, Vergleiche anzustellen, indem versucht wird, das eigene Modell in Zusammenhang mit den anderen Modellen zu sehen. Nicht jedoch kann es das Ziel sein, die Ausbildungsysteme gleich zu machen. So bestätigte sich für Österreich, daß das duale System der Lehrlingsausbildung als Erstausbildung für Facharbeiter viele Vorteile aufweist, jedoch schwerpunktmäßig fachliche Kenntnisse vermittelt. Die Vermittlung von darüber hinaus gehenden allgemeinbildenden Kenntnissen erfolgt zumeist extra oder im Rahmen von Weiterbildungsmaßnahmen. Anregungen zu einer parallelen Vermittlung von fachlichen und allgemeinbildenden Inhalten können aus den deutschen, holländischen und vielleicht auch englischen Modellen übernommen werden. Erste Schritt in diese Richtung

wurden in Österreich im Herbst dieses Jahres mit der Einführung der Berufsreifeprüfung gesetzt.

Gleichklang der Bestrebungen

Sieht man von den unterschiedlichen Einbettungen der INTEQUAL-Modelle in die nationalen Bildungssysteme ab, fällt auf, daß die Methoden und Zielsetzungen einander sehr ähnlich sind.

So setzen eigentlich alle INTEQUAL-Modelle vermehrt auf anwendungsorientiertes, handlungsorientiertes Lernen, Selbstlernen, Learning by doing etc als wesentliches Merkmal der Doppelqualifizierung.

Auch viele Inhalte der Ausbildung, wie etwa die Vermittlung bzw das Training von Schlüsselqualifikationen, ist in allen Ländern festzustellen.

Grenzen der Verknüpfung von „vocational and general education"

Es zeigte sich, daß die Balance zwischen den fachlichen und den allgemeinbildenden Inhalten oft schwer zu finden ist. So wurden die Schwerpunkte zumeist verstärkt auf einen Bereich gelegt, so z.B. in Holland auf die fachlichen, in England auf die allgemeinen Inhalte. Hier zeigen sich die Grenzen der zweifach orientierten Ausbildung, vor allem wenn sie in der Erstausbildung lokalisiert ist. Weiters besteht auch die Gefahr, daß sich die vormals getrennten Ausbildungsgänge - vocational and general education - derart angleichen, daß sie sich auf EINE Ausbildungsform reduzieren. Daher ist der österreichische Weg, diese Ausbildung als Weiterbildung zu führen, eine mögliche Alternative. Denn das derzeit vielfältige Angebot an Ausbildungsmöglichkeiten, das den unterschiedlichen Fähigkeiten der Lernenden entgegenkommt, sollte auf keinen Fall verringert werden.

System der Trainerschulung

Von dem System der Trainerschulung in Norwegen sind für Österreich stimulierende Ansätze - wie etwa die pädagogischen Schulung - zu übernehmen.

Gleichwertigkeit von Begriffen im EU-Raum

Trotz intensiver Beschäftigung mit den Begriffen „vocational und general education" und „higher education" im Rahmen dieser Studie, mußte doch festgestellt werden, daß innerhalb der Ausbildungssysteme der verschiedenen Länder die Bedeutungen dieser Begriffe mal mehr mal weniger unterschiedlich sind. Der Schluß, der daraus zu ziehen ist, ist nicht die Äquivalenz dieser Begriffe anzustreben, sondern ihre Bedeutung im Konnex des Bildungssystemes der jeweiligen Länder erkennen zu lernen.

Studien versus Literaturaustausch

Das Ziel gemeinsam, länderübergreifend eine Studie zu erarbeiten, bedeutet eine wesentlich intensivere Auseinandersetzung mit den Ausbildungssystemen der Partnerländer und deren Einbettung in die historisch gewachsenen Strukturen, als der bloße Vergleich von Systemen aufgrund von Literaturrecherchen. Daher bringt eine gemeinsame Studie eine viel größere Unmittelbarkeit der Forschungergebnisse mit sich. Darüber hinaus ist eine Einschätzung der Transfermöglichkeiten bestimmter Aspekte eines Ausbildungsganges in den eines anderen Landes wesentlich besser möglich.

Chapter 8

LESSONS LEARNED - AN ENGLISH PERSPECTIVE

Alan Brown

The INTEQUAL topic studies enabled key issues to be studied in microperspective. From an English perspective, the Anglo-Dutch study of transitions to higher education from vocational pathways was particularly revealing in a number of respects. The most striking feature was the extent to which the Dutch mbo pathway was successful in its dual orientation. That is, it was a genuine route into skilled employment, with significant numbers of mbo graduates also entering higher education, and the qualification was taken by over half the 16-19 age cohort. This was the type of performance hoped for from GNVQ upon its launch in 1992. By 1997, it had been tacitly accepted that, in its current format, advanced GNVQ was unlikely to appeal to more than 20% of the cohort. So there is scope to learn from the Dutch experience in the design of a more attractive and popular vocational pathway for 16-19 year olds.

The lessons learned from the comparative Anglo-Dutch study are three-fold. First, the qualification has to have (or be able to build towards having) a genuine labour market value, ideally in giving access to work which leads directly or indirectly towards skilled employment. This leads to the second requirement: the pathway needs to be extended, lasting for at least three years, in order to allow sufficient time to gain some practical experience and to build a substantial vocational knowledge base. This would underpin the value of the qualification in the labour market.

The third lesson is that it may be more helpful to change the orientation of the HE curriculum, rather than always seeking to change the dual qualification to fit the requirements of HE. The essence of a vocational pathway should be that it is sufficiently distinct from an academic pathway so as to offer a genuine alternative means of progression towards skilled employment or higher education.

On the positive side, however, the comparison did also highlight that there was scope for mutual learning. The lack of emphasis upon the development of independent learning skills was an evident handicap in securing successful progression to higher education from mbo, and this reinforced the value of this approach within GNVQ.

The detailed comparisons between England and the Netherlands were of most direct value, but the experience of other countries reinforced the lessons highlighted above. For example, the German system is based upon a vocational pathway, which does have a general labour market utility, as well as facilitating more specialist progression. The Austrian experience also showed the value of having a more extended pathway to higher education for those interested in progression from outside the academic route.

The final overarching lesson learned from participation in the INTEQUAL project is that the English system of 16-19 Qualifications requires further reform. The next set of reforms, however, should take much greater cognisance of the experience of other countries, and implementation of reform should be carefully managed. Over-hasty implementation, as was the case with GNVQ, can mean that the qualification has to struggle for acceptance, fails to realise its full potential, and the goals of the reform are not achieved.

Chapter 9

NATIONAL CONCLUSIONS FOR FRANCE

Henri Eckert & Jean-Louis Kirsch

At the end of this joint study, we would like to stress three points:

- the first deals with further comparative study of firms in countries that are most similar to the French situation;
- the second is more an expression of interest in experimental systems being implemented that differ more from the French situation and for this reason present a very different approach to certain problems;
- the third attempts to begin a discussion about the original principles of this work, namely those of 'parity of esteem' and 'integrating qualifications'.

(1) Further study using the comparative approach

In light of the reports of the seven countries, we have been struck by the *similarity that exists between situations in Great Britain, the Netherlands and France* concerning the approach to the issue of how a diploma should provide access both to the labour market and pursuit of studies in higher education.

Upon initial examination, the GNVQ system seems to be undergoing a change, perhaps a change of direction, as it abandons immediate entry into professional life for a preparatory function for higher education similar to that of the French technological baccalaureates. The MBO has preserved its professional vocation despite a gradual change in its original population, a change also observed in the population of professional baccalaureate students, but at the same time there is a stream (HAVO) that prepares students for higher professional education. Thus, there are links between the general stream and the technological and professional streams that deserve a more detailed comparative study that the objectives of INTEQUAL do not allow.

In addition to the above, the British and Dutch systems, in particular, allow a certain leeway with training time (advanced GNVQ, three and four years MBO courses), a possibility not

provided by the French system, which would be interesting to examine in terms of the desire to develop life-long training programmes.

Furthermore, the evaluation issue brought up by the GNVQs strongly highlights a certain number of issues in the French debate about certification and validation of knowledge and, from a particular angle, clarifies the debate about the possibility of disassociating training and certification.

(2) Interest in other experimentation

Experimental systems presented by other countries are more recent. For this reason, they do not lend themselves to the same type of analysis as longer established systems, a difference which leads us to be interested more in monitoring their implementation than in the results of their application.

Consequently, for the issues raised by the French system, the *Norwegian and Swedish systems* attract attention for two reasons:

- In the Norwegian situation, the system offers gradual access to specialisation, beginning with ten basic professional specialties in the first year to nearly eighty in the second and two hundred in the third, developed through an original tree-like pattern. For French questions about the issues of cross discipline skills and defining core curricula, the model is an original approach that could bring together specialists of the two countries.
- At the same time, the system of financial aid to the firms, during the third and fourth years of training is an interesting model when compared to the various French systems available to young people for training and facilitating the transition to professional life.

German experimental programmes touch on the issue of integrating academic subjects with professional subjects, a very current debate in France that has been revived by the issue of validating acquired professional knowledge in the professional training system.

Finally, *the Austrian situation* provides food for thought in the areas of training working adults, the role played by companies in this training and the recognition given to it by employers.

(3a) Parity of esteem

We are somewhat reluctant to use the notion of 'parity of esteem' within the framework of INTEQUAL, and it seems to us that in other countries the same reluctance is often felt.

Creating a professional baccalaureate cannot be considered, strictly speaking, as the desire to establish a situation of equality for continuing studies between holders of this baccalaureate and those of the general or technological baccalaureate degrees. The repeated and proclaimed objective of the professional baccalaureate degree is above all to provide an entry into working life. Thus, it seems to us excessive to claim the parity of esteem as one of the reasons for creating this qualification.

If we put aside the set of issues specific to French professional baccalaureate, the issue of parity of esteem sometimes leads to a paradoxical attitude. Parity of esteem tends to promote technological or professional training by increasing the number of general education courses in technological and professional training programmes. To do so is to admit that general education and technological or professional education do not have the same status since the former enjoys higher recognition than the latter two. Ultimately, one could even declare that the real proof of parity of esteem would be introducing technological and professional training into general education and not the converse.

In these circumstances, we believe that the notion of parity of esteem should be considered not as a natural explanation of these changes in training systems - and in particular technological and professional training - but as a subject of study to clarify these changes. Such a study requires using rigorous construction of the subject which presupposes at least two prior approaches:

- defining the relationships between culture and technology and the variations that they encounter according to countries;
- specifying the social status of workers and the images that young people have of them, particularly young people in the process or at the end of professional training.

(3b) Integrating qualifications

About integrating qualifications, two points can be stressed:

- In terms of programme and apprenticeship design, the question of integration is posed in two ways. The first relates to the integration of traditional disciplines into coherent "magnets". The second is related to the professional integration of knowledge acquired in the classroom and during training periods.
- Underlying the necessary integration of knowledge, there are the dynamics of social integration which challenge the traditional roles when educators from different disciplines must

work together in teams, when a joint project is developed between this team and the firms hosting the students and when a contractual relationship is formed between the trainee, the educator and the advisors in the firms.

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CONCLUSIONS NATIONALES: FRANCE

Henri Eckert & Jean-Louis Kirsch

A l'issue de ce travail commun, nous souhaitons insister sur trois points :

- le premier concerne un approfondissement de la comparaison entreprise avec des pays par rapport auxquels le cas français présente une proximité forte ;
- le second constitue davantage une manifestation de curiosité sur la mise en place d'expériences qui s'écartent plus de la situation française, et présentent à ce titre l'avantage d'une approche très différente de certains problèmes ;
- le troisième tente de lancer une réflexion sur les principes qui ont été à l'origine de ces travaux, à savoir celui de « parité d'estime » et celui d'« intégration des qualifications ».

(1) Un approfondissement de la démarche comparative

A la lumière des rapports nationaux, nous avons été frappés par la *proximité existant entre le cas de l'Angleterre, des Pays-Bas et de la France* quant à la façon d'aborder la question d'un diplôme devant permettre d'accéder à la fois au marché du travail et de poursuivre des études dans l'enseignement supérieur.

En première analyse, le système des GNVQs semble connaître une évolution (une dérive ?) vers l'abandon d'une professionnalité immédiate en faveur d'une fonction propédeutique à l'enseignement supérieur assez semblable à celle que présentent nos baccalauréats technologiques. Le MBO, quant à lui, conserve sa vocation professionnelle malgré la transformation progressive de sa population d'origine, transformation que l'on observe également dans la population des élèves de baccalauréat professionnel, mais il existe en parallèle une filière (HAVO) qui destine à l'enseignement professionnel supérieur. Il y a donc une articulation filière générale-filière technologique-filière professionnelle qui mérite de faire l'objet d'une investigation comparative plus détaillée que ne le permet l'objectif d'INTEQUAL.

Par apport à celà, les systèmes anglais et néerlandais prévoient en particulier une possibilité de jeu sur le temps de formation (advanced GNVQ, three and four years courses MBO) que le système français n'offre pas et qu'il pourrait être intéressant d'envisager par rapport à la volonté de développer la formation tout au long de la vie.

En outre, le problème d'évaluation posé par les GNVQs rencontre fortement un certain nombre des questions soulevées à propos du débat sur la certification et la validation des acquis en France et éclaire, sous un angle particulier, le débat sur la possibilité de dissociation entre formation et certification.

(2) Curiosité à l'égard d'expériences nouvelles

Les expériences présentées par les autres pays sont plus récentes. De ce fait, elles ne s'offrent pas au même type d'analyse que les systèmes établis de plus longue date, ce qui conduit à s'intéresser plus au suivi de leur mise en place qu'au bilan de leur application.

C'est ainsi que les *systèmes norvégien et danois* suscitent, par rapport aux questions que se posent le système français, un double motif d'attention :

- Ils proposent un accès progressif à la spécialisation, passant, dans le cas de la Norvège, de 10 spécialités professionnelles de base la première année à près de quatre-vingt dix la seconde et de deux cents la troisième, selon une formule d'arborescence originale. Par rapport aux interrogations françaises sur les questions de compétences transversales et de définition de troncs communs, le modèle proposé constitue une approche originale qui pourrait faire l'objet de rencontre pour les spécialistes des deux pays.
- Parallèlement, le système de prise en charge de l'étudiant par l'entreprise, moyennant dédommagement de cette dernière, pour la troisième et la quatrième année de formation représente une formule intéressante par rapport aux différents systèmes français d'aide à la formation des jeunes et de facilitation de la transition professionnelle.

Les *expériences allemandes*, pour leur part, abordent la question de l'intégration des matières académiques aux matières professionnelles, débat également très actuel et ravivés par la question de la validation des acquis professionnels dans le système de formation professionnelle en France.

Enfin, le *cas autrichien* offre matière à réflexion en matière de formation des salariés adultes, du rôle que jouent les entreprises dans cette formation et de la reconnaissance qui lui est accordée par les employeurs.

(3a) La notion de parité d'estime

Nous avons quelque réticence à utiliser la notion de « parité d'estime » dans le cadre d'INTEQUAL, et il nous semble que d'autres pays peuvent ressentir la même gêne. En effet, la création du baccalauréat professionnel ne peut pas être considérée à proprement parler comme la volonté d'établir une situation de parité de poursuite d'études entre les titulaires de ce baccalauréat et ceux du baccalauréat général ou du baccalauréat technologique. L'objectif affiché et répété du baccalauréat professionnel est en effet d'assurer en priorité l'entrée dans la vie active. Il nous paraît donc abusif de poser la parité d'estime comme une des raisons de création de ce diplôme.

Si l'on sort de la problématique propre au baccalauréat professionnel, la question de la parité d'estime conduit parfois à une attitude paradoxale, puisqu'elle tend à prôner la promotion de l'enseignement technologique ou professionnel par l'accroissement de la part d'enseignement général qu'ils incluent. C'est reconnaître par là même qu'enseignement général et enseignement technologique ou professionnel n'ont pas le même statut, le premier bénéficiant d'une reconnaissance supérieure aux seconds. A la limite, on pourrait affirmer que la véritable preuve d'une parité d'estime serait l'introduction d'un enseignement technologique et professionnel dans l'enseignement général, et non l'inverse.

Dans ces conditions, nous estimons que la notion de parité d'estime doît être prise en compte non comme une explication naturelle des transformations des systèmes de formation - et en particulier de formation technologique et professionnelle - mais comme une objet d'étude éclairant ces transformations. Ceci nécessite de passer par une construction rigoureuse de cet objet qui suppose au moins deux démarches préalables :

- celle de la définition des rapports entre culture et technique et des variation qu'ils rencontrent selon les pays ;
- celle de la place sociale des ouvriers et des représentations qu'en ont les jeunes, particulièrement les jeunes en cours ou en fin de formation professionnelle.

(3b) Intégration des qualifications

En matière d'intégration des qualifications, deux points semblent à souligner :

- Cette question se pose d'au moins deux façons. la première concerne l'intégration des matières académiques et des matières professionnelles d'enseignement, la seconde l'intégration des connaissances acquises en milieu de travail et en milieu de formation .
- Cette question d'intégration dépasse la champ de la seule pédagogie et remet en question le rôle traditionnel des formateurs, mais aussi celui des formés, en mettant l'accent sur les nécessités de travailler en équipe, sur la base d'objectifs contractuellement définis, impliquant des partenaires du système productif.

Chapter 10.1

INTERNAL BAVARIAN CONCLUSIONS

Werner Kusch

In Germany initial vocational training is traditionally jointly sponsored by the ministries of culture and education and the German economy. This system ("Duales System") entails that trainees are employed/trained by a company for a period of 3 to 3 ½ years, while attending a state vocational school at least one day per week. The current vocational school systems in existence in Germany's Länder offer skilled workmen - upon having received accreditation by their local chambers of commerce (and having completed initial vocational training) - the possibility of attending further education oriented vocational schools (e.g. the Fachoberschule or Berufsoberschule) . These schools can be attended full or part-time with one to four years of instruction (depending on frequency and extent of attendance). Upon successful graduation they give students the opportunity of attending institutions of higher study such as the Fachhochschule or university. Another possibility involves taking and passing supplementary examinations.

Students attending higher level vocational schools miss out on some of the advantages Gymnasium students have. For one thing, higher level vocational students all in all have to invest quite a bit more time to complete courses qualifying them for higher level study at a university or Fachhochschule. And for another, their training being hands-on and vocational field oriented does not prepare them as well for exams (generally theoretical, general educational oriented) as does the Gymnasium with its general education focus on subjects such as German, English and Maths.

Because our partner states offer dual qualifying vocational/educational routes which for the most part are full-time and state-sponsored (The WIFI Professional Academy being an exception) these routes most likely will not at any time in the near future be compatible to (and be able to be implemented in) Germany's initial vocational training. In as far as higher level vocational training is concerned, however (i.e. vocational/educational training leading to either general or subject/vocation specific higher study qualifications at a university or the Fachhochschule), there is a partial compatibility, examples in case are the Norwegian and Swedish models. As far as German further educational training programs are concerned, similar models exist in England and Wales or Austria.

It is remarkable that nearly all partner countries are very much in agreement on a variety of major points, have the same concerns and are mutually working on resolving very similar following problem areas. Thus:

- All agree that successfully combining general education and vocational study contents (and developing relevant curricula) could greatly strengthen the credibility and quality of vocational educational routes and enhance students later professional mobility.
- All hope that the dual qualification path with its related higher study qualification opportunity will in the long run lead to a change in thinking - entailing that vocational education will be seen as equivalent to general education by almost everyone.
- All believe that the plasticity/transparency of vocational and general education related study contents will be greatly improved by way of implementing new modes of instruction and learning, e. g. hands-on learning, learning by doing.
- All are convinced that students' subject/vocation specific and personality related key qualifications must be promoted so that they can later better adapt to constantly changing technological and societal demands and enable them to a life among other things devoted to a life long learning process.

It is clear that these ideas and developments will in the long term not only lead to the greater credibility and better reputation of vocational school systems in the European partner states, but also will cause greater mutual recognition of and for EU-countries' vocational and general education school systems as having comparably good/ compatible standards of quality. INTEQUAL's research and resulting findings will no doubt have contributed. Germany, as a consequence, should have these realizations flow into the university training package offered to its future teachers.

SCHLUSSFOLGERUNGEN AUS BAYERISCHER SICHT

Werner Kusch

Traditionell wird der überwiegende Teil der beruflichen Erstausbildung in der Bundesrepublik Deutschland getragen durch die gemeinsame Verantwortung der Kultusministerien der einzelnen Länder und der bundesdeutschen Wirtschaft (Duales System), d. h. die Auszubildenden sind für 3 bis 3 1/2- Jahre Betriebsangehörige, müssen in dieser Zeit aber auch mindestens einen Tag pro Woche in eine (staatliche) Berufsschule gehen. Die derzeit bestehenden beruflichen Schulsysteme der Länder bieten den Facharbeitern der Industrie- und Handelskammern bzw. den Gesellen des Handwerks durch den anschließenden Besuch von weiterführenden beruflichen Schulen (z. B: Fachoberschule oder Berufsoberschule) mit ein- bis vierjährigem Voll- oder Teilzeitunterricht oder durch die Teilnahme an sogenannten Ergänzungsprüfungen die Möglichkeit, eine Studienberechtigung für eine Fachhochschule oder eine Universität zu erwerben. Nachteilig - gegenüber dem allgemeinbildenden gymnasialen Schulsystem - wirken sich die längeren Ausbildungszeiten, die z. T. fachrichtungsbezogenen Studienberechtigungen und die starke Akzentuierung allgemeinbildender Unterrichtsfächer wie Deutsch, Englisch und Mathematik an diesen Schulen bzw. in den Prüfungen aus.

Da es sich bei den von den anderen Partnerstaaten vorgestellten doppelqualifizierenden Bildungsgängen weitgehend um vollzeitschulische, staatliche Bildungsgänge handelt, (ausgenommen die WIFI-Fachakademien in Österreich), lassen sich diese Organisationsformen wohl auch in Zukunft nicht auf die bundesdeutsche berufliche Erstausbildungslandschaft übertragen. Was aber die höhere berufliche Qualifizierung angeht, so sind berufliche Bildungsgänge im Sekundarbereich II (Ebene zum Erwerb der Fachhochschulreife, der fachgebundenen bzw. der allgemeinen Hochschulreife) teilweise vergleichbar z. B. mit den Modellen in Norwegen und Schweden. Was den Bereich der bundesdeutschen Fort- und Weiterbildungsmaßnahmen angeht, gibt es Analogien zu den Modellen in England und Wales bzw. Österreich.

Beeindruckend ist, dass sich fast alle Partnerländer gemeinsam mit den nachfolgend aufgeführten Problembereichen beschäftigen, so z. B.:

- alle sehen durch die Kombination von allgemeinbildenden mit beruflichen Lerngegenständen -und z. T. auch durch die Entwicklung entsprechender Curricula- die Möglich-

keit, das Ansehen und die Qualität beruflicher Bildungswege zu stärken, nicht zuletzt auch deshalb, um die berufliche Mobilität der Heranwachsenden zu verbessern;

- über den Weg doppelqualifizierender Bildungsgänge und die damit verbundene Erlangung einer höheren Studienberechtigung erhofft man langfristig, zu einer Gleichwertigkeit beruflicher Bildung gegenüber allgemeiner Bildung zu kommen;
- einer Verbesserung der Anschaulichkeit von beruflichen und allgemeinbildenden Leminhalten durch neue Lernmethoden, so z. B. durch handlungsorientiertes Lernen;
- einer Suche nach fachlichen und persönlichkeitsbildenden Basis-Qualifikationen, damit die Lernenden den technologischen und gesellschaftlichen Wandel in der Zukunft besser bewältigen können, ferner um die Lernenden zu einem lebenslangen Lernen zu befähigen.

Es steht fest, dass diese gleichlaufenden Entwicklungen und Überlegungen in den europäischen Partnerländern langfristig nicht nur zu einer Verbesserung des Ansehens beruflicher Bildung führen, sondern innerhalb der EU-Länder zu einer gegenseitigen Anerkennung von beruflichen und allgemeinbildenden Ausbildungen mit vergleichbaren Qualitätsstandards führen. Dazu tragen auch die beiden Ausarbeitungen der INTEQUAL-Studie bei. In der Bundesrepublik Deutschland sollten deshalb diese Erkenntnisse auch in den Bereich der universitären Ausbildung von Berufpädagogen einfließen.

Chapter 10.2

NATIONAL CONCLUSIONS

Rainer Bremer & Gerald Heidegger

Internal conclusions made in the federal state of Brandenburg

Because the pilot project is seen to be successful the laws of this federal state have been changed so that from now on every vocational scholl in Brandenburg can offer such a double qualification. There are only two conditions:

- At least 16 students who require a contract with an enterprise are needed to establish the model in a region.
- The school must have partners which can be enterprises or small shops which teach in vocations according to the federal laws which regulate the vocational system (»Berufsbildungsgesetz«). In fact this includes finding partners who are already involved in vocational education but prefer to opt for an integration of academic and vocational education. This remained a political question.

In Brandenburg — as in all five new »countries« (federal states) — the ordinary dual system of vocational education and training is severely suffering from the economic depression. The industrial enterprises have nearly vanished so that there is no vocational training except in the sector of craftsmanship. The remaining places for vocational training are financed up to 80% by the administration — there is no vital situation for reforms.

On the other hand, in spite of the economic depression the model is more attractive than ever because of the academic drift. Young people realise that their safest way can only be the gymnasium. But as this doesn't mean that they all want to study afterwards the vocational system suffers from apprentices who are only of medium ability — the other first choose the gymnasium hoping to get one of the short contracts with enterprises afterwards. These students pass the secondary school level twice which is more expensive than to establish double qualifications. The impact of this systemic–structured decisions of parents and students will lead to the exclusion of all those who cannot gain the »Abitur«. Because of this the Brandenburg administration has provided the opportunity

of acquiring the double qualification all over the country, but it still fails to find the required number of dual partners.

Conclusions made in the federal republic of Germany

There is no general adoption of the pilot project. This is because of the legal situation, garanteed by the constitution. Only the federal states themselves can decide whether to adopt the model. On the one hand a lot of federal states — for instance our INTEQUAL partner Bavaria — have already started establishing double qualifications. On the other hand and more important the commission of the Ministers responsible for schools (KMK) have reached agreements concerning the value of vocational education. They attempted to increase this value up to a real parity of general and vocational education, especially relating to double qualifications. In the future it will be possible to combine a vocational education qualification with the Abitur. Some more pathways from vocational to academic education will be provided. This may be seen as a consequence of several pilot projects like »Schwarze Pumpe« and, last but not least, of the beginning discussion about European reforms which the project INTEQUAL became a part of.

Lessons from mutual learning

According to the differences in reforms which took place in the seven countries participating in INTEQUAL the Brandenburg project received some ideas of further reforms relating to systemic, political and pedagogic innovations.

In a systemic view France, Austria, Norway and Sweden showed us the short dimensions of our pilot project:

- France established the »bac pro« at the highest academic level, so that the young people can realise the full equivalence of the vocational pathway. To this extent the pilot project can't offer careers. In the end a combination of the »Abitur« with a vocational training is still missing.
- Austria offers a qualification of dual orientation to those who have finished the secondary level. Young adults who have chosen the vocational pathway have the chance to enter academic studies. Our pilot project offers no links to the tertiary sector in combination of both ways of learning. Integration shouldn't stop with secondary schools or initial vocational training.

- Norway and Sweden showed us the great advantage of a reform of the whole system. They didn't start with pilot projects but with the reform in total. This led at least to more competition among the national schools which retained the dynamic of the reform. This is not substantially terminated as it will happen to our pilot project.

In a political view the Netherlands showed us some restrictions of our own model:

- Though there is no real integration in the Dutch reform the young people find orientation in the system which seems to us to be a kind of »staircase«. Relating to the structure the system of MBO and HBO offers an equivalence of academic and vocational education because there are only differences between levels but not between two pathways.

In a pedagogic view England showed us some restrictions of our own model, too:

- The integration of vocational skills and knowledge in secondary education by NVQs and GNVQs offers the young people possibilities to choose which is nearly impossible in the German system because of its legal status. But young people at the age of 16 up to 20 can be expected to know what they want to learn. To give them responsibility for their career by making their own decisions is a pedagogic value of its own which should be typical of higher integration. The English reform reminded us of the fact that in Germany only the »Gymnasium« offers the students several subjects to choose. A real integration of vocational and academic education would demand the similarity of the degree of responsibility for the chosen way of learning.

Though some of the listed criteria would be contradictory if followed at once in a consecutive national reform, the experience of common research on common problems and (different) solutions has opened up a wider horizon of problems and solutions. Especially when the intensive national debate about demands of further reforms touch the European context — what in fact happens more und more often — we now are able to differentiate between the systemic, political and pedagogic impact of reforms. In the future national reforms are expected to take account of the European context.

NATIONALE SCHLUSSFOLGERUNGEN

Rainer Bremer & Gerald Heidegger

Schlußfolgerungen, die das Land Brandenburg gezogen hat

Weil der Modellversuch »Schwarze Pumpe« als erfolgreich betrachtet wurde, ist das Brandenburgische Schulgesetz dahingehend geändert worden, daß der doppeltqualifizierende Bildungsgang zum Regelangebot gemacht wurde. Dabei wurden zwei Bedingungen formuliert:

- Mindestens 16 Schüler müssen im Einzugsgebiet der Schule einen Ausbildungsvertrag mit einem Unternehmen oder einem Handwerksbetrieb abgeschlossen haben, der dem Modell zustimmt.
- Die Schule muß in diesen Betrieben Partner finden, die in Berufen nach BBiG ausbilden und bereit sind, zwei Berufsschultage zu akzeptieren (wenn die Ausbildung in nicht neu geordneten Berufen geschieht). Die Zahl der Unterrichtsstunden steigt von 12 auf 15. Letztlich ist die Bedingung, die Doppelqualifikation mit der Zustimmung der betrieblichen Seite durchzuführen, eine nur politisch zu erfüllende.

Brandenburg leidet — wie alle anderen »neuen« Länder auch — unter einem Rückgang der Industrieproduktion gegen nahezu Null. Es gibt kaum ausbildende Industriebetriebe, weil die Industrie zusammengebrochen ist. Wo welche existieren, werden die dort noch angebotenen Ausbildungsplätze zu 80 % staatlich (mit–)finanziert.

Andererseits birgt die Krise auch Chancen für Reformen im dualen System. Die vorherrschende Reaktion Jugendlicher sowohl auf die knappen Ausbildungsplätze als auch auf die hohe Arbeitslosigkeit unter Industriearbeitern besteht in der Wahl des gymnasialen Bildungsgangs. Gerade leistungsfähige Jugendliche entscheiden sich gegen eine duale Berufsausbildung. Viele (Eltern und Schüler) glauben, daß das Abitur selbst eine gute Voraussetzung für eine spätere — auch duale — Ausbildung ist. Diese Jugendlichen durchlaufen dann zweimal die Sekundarstufe II. Sozialpolitisch führt dies zur Verdrängung der Jugendlichen, die das Gymnasium nicht besuchen. — In dieser Situation sucht Brandenburg nach integrativen Modellen, die den Jugendlichen beide Optionen offenhalten. Die landesweite Ausdehnung des Modellversuchs als Regelangebot wird derzeit vor

allem dadurch behindert, daß zuwenige Betriebe bzw. Unternehmen zur Zusammenarbeit bereit sind (ausschlaggebend ist die Unkenntnis des neuen Modells).

Schlußfolgerungen, die auf Bundesbene gezogen wurden

Es gibt keine allgemeine Adaption des Modells. Die Regelung von schulischer Bildung und Ausbildung ist Ländersache, die maximal denkbare Verbreitung von Doppelqualifikationen kann nur in zwei Schritten geschehen: 1. Die Länder erkennen die einzelnen Modelle in einzelnen Ländern an (was im Modellversuch geschehen ist), 2. Die Länder übernehmen *jedes für sich* diese Modelle. 6 westdeutsche Länder (einschließlich Bayern) und 4 ostdeutsche haben das Modell entweder in Erprobung oder im Regelangebot (wie Bremen und Nordrhein–Westfalen). Die KMK hat in letzter Zeit, unabhängig von der erst nur geringen zahlenmäßigen Bedeutung der Doppelqualifikationen, nach und nach Regelungen außer Kraft gesetzt, die diese Bildungsgänge behinderten. Vor allem wird Gleichwertigkeit nun auf dem Wege der äquivalenten Anerkennung beruflicher leistungen auf allgemeinbildende Abschlußstufen hergestellt. Die europäische Integration spielt bei der »Öffnung« entsprechender Klauseln eine erhebliche Rolle.

Effekte durch gegenseitiges Lernen in INTEQUAL

Die gegenseitig und gemeinsam untersuchten Reformen weisen erhebliche Unterschiede auf. Um dem gerecht zu werden, sollen im folgenden die erhaltenen Anregungen unter den Gesichtpunkten Bildungs*system–*, *-politik* und *pädagogische Qualität* unterschieden werden.

In systematischer Hinsicht zeigten uns die Modelle aus Frankreich, Österreich, Norwegen und Schweden den äußerst bescheidenen Reformrahmen des eigenen Projekts:

- Frankreich hat das »bac prof« eingeführt, damit eine berufliche Orientierung des höchsten erreichbaren Abschlusses etabliert. Das gibt den Jugendlichen das Gefühl, mit einer beruflichen Orientierung keine Zukunftsoptionen aufs Spiel zu setzen. Die brandenburgische Reform hinterläßt eine Lücke in der Integration von Studienberechtigung und Berufsausbildung (vor allem vor dem Hintergrund der »Berufsausbildung mit Abitur« der DDR).
- Österreich erstreckt das Prinzip doppIter Option auf die Weiterbildung. Junge Erwachsene können nach einer Berufsausbildung ein Studium beginnen, wenn sie am Modell

teilnehmen. Unser Modellversuch eröffnet zwar beide Wege des tertiären Sektors, befördert aber nicht mehr die Integration auf diesem Niveau.

- Norwegen und Schweden haben bei ihren Reformen den Gesamtmaßstab nutzen können. Statt mit einer einzelnen Schule oder wenigen probehalber zu beginnen, haben sie das System im ganzen reformiert. Zumindest in einer Hinsicht haben solche »Top–down–Modelle« kleinen, eher isoliert durchgeführten Erprobungen einen Vorteil voraus: Sie schaffen ein Milieu des Wettberwerbs unter den Schulen der Regionen und sie behalten für längere Zeit die Dynamik des Wandels.

In bildungspolitischer Hinsicht hat das niederländische Beispiel uns gewisse Beschränkungen vor Augen geführt:

- Obwohl das nierderländische Modell keine wirkliche Integration von beruflicher und allgemeiner Bildung anstrebt, wurde mit ihm eine »treppenförmige« Struktur geschaffen. MBO und HBO erzielen eine Gleichwertigkeit dadurch, daß Unterschiede nur in bezug auf die Reichweite der Abschlüsse, nicht in bezug auf grundsätzlich unterschiedliche Wege durchschlagen.

In pädagogischer Hinsicht zeigte das englische Beispiel Beschränkungen unseres Modells:

- Die Integration beruflicher Kenntnisse und Fertigkeiten in der Sekundarstufe II im Rahmen von NVQ und GNVQ bietet den Jugendlichen Wahlmöglichkeiten, die dem deutschen System fast völlig fremd sind. Ausbildenden im dualen System werden alle Entscheidungen (bis auf den Beruf) durch Richtlinien und Curricula abgenommen, während für Jugendliche zwischen 16 und 20 Jahren es wichtiger Bestandteil der adoleszenten Reifung ist, selbst entscheiden zu lernen und dafür die Verantwortung zu übernehmen. In Deutschland stehen vergleichbare Wahlmöglichkeiten nur Gymnasiasten in der Oberstufe offen, die dazu mehr und mehr eingeschränkt werden.

Obwohl eine der genannten Kriterien in Widersprüche führen müßten, würden sie in einer nationalen Reform gleichzeitig verfolgt, hat die gemeinsame Erforschung gemeinsamer Probleme und (unterschiedlicher) Lösungen zu einer Erweiterung des Fragehorizonts geführt, vor dem Probleme und ihre Lösungen ihre nationale Prägung auch der *Sichtweisen* verlieren. Vor allem wenn die jetzt schon intensive nationale Diskussion um weitere Reformen von Bildung und Ausbildung das Thema europäische Integration umfaßt, sind wir nun in der Lage, in erheblich erhöhter Breite systematische, politische und

pädagogische Implikationen von künftigen Reformen zu bedenken. Das ist selbstverständlich nötig und nützlich, wenn die kommenden Reformen ausdrücklich ihre europäische Kompatibilität ausweisen müssen.

Chapter 11

THE NETHERLANDS: NATIONAL CONCLUSIONS

Trudy Moerkamp & Eva Voncken

1 In most European countries integration of general education and vocational education is an 'hot item', in particular with regard to attractiveness and status of VET. But in the Netherlands integration of these two types of education is not an issue at all[1]. Both routes are completely separated and function under different education acts.

In spite, or perhaps thanks to, this separation, vocational education at senior secondary level (MBO) is rather successful in the Netherlands: about half of the 16-19 year olds attend this type of education and graduates of MBO acquire good positions at the labour market.

During the joint study in the INTEQUAL project, (and also in other international relations), the question has been raised why MBO in the Netherlands seems to be so successful. Perhaps the fact that MBO always had a double qualifying function might explain why students (and their parents) consider both general and vocational education as a good option.

But the comparison of education systems in the partnership also raises a more negative hypotheses: because in the Netherlands education at junior secondary level is not integrated and comprehensive, there is an early selection (at the age of 12-14). At the moment there are no data available in the Netherlands on choices and preferences of students and their parents that could prove or disprove this hypotheses.

2 Many European countries (Sweden, Norway, France, England) reduced the number of occupational specialisations in VET. As a consequence they broadened VET. In the Netherlands there still are many VET courses and specializations (more than 200). With regard to transfer into higher education and with regard to developments in labour organization and the labour market, experiences with broad vocational educa-

[1] At least it is not an issue at senior secondary education level, integration is under discussion at the level of junior secondary education.

tion in other European countries are important for the Netherlands. The question is however, how to design broad vocational education without becoming pre-vocational. Some countries (England, Sweden, Norway) in their national case studies stress the point that VET diplomas should offer opportunities for graduates to enter the labour market. Making VET more pre-vocational instead of vocational might stimulate students just to use VET as an entry into higher education.

Together with England and France, the Netherlands intend to study and analyze the VET curricula in these three countries with regard to this point.

3 Although in the Netherlands integration of vocational education and general education is not an issue, we would like to stress at this point the importance of a (re)opening of the discussion with respect to integration.

Compared to Sweden, Norway and England, students in the Netherlands have very little possibilities to design their own pathway through the education system. Students in the Netherlands are very much pinned down by their (early) choice between vocational and general education and by their choice within the VET system for an occupation.

A more flexible system probably could be helpful to solve problems in both the VET and general education system. For instance it could be helpful for students in VET to prepare themselves for transfer into higher education. And it could help students in the general system with regard to occupational choice and preparation.

4 In particular Germany, England, Norway and Sweden have good experiences with new teaching methods in vocational education (project work, integrated learning, active learning). The national case study of England stressed some disadvantages of modular methods. In the Netherlands traditional modular teaching methods, used in most vocational courses, are also criticized. MBO schools recently started experiments with new teaching methods. With respect to these methods the Netherlands could benefit from the experiences of other European countries.

5 Secondary vocational education in the Netherlands has three main goals: qualification for the labour market, qualification for further education and qualification for citizenship and social participation.

Despite these three goals, Dutch VET courses can be characterized as pragmatic: very much skill oriented, a rather narrow skill concept. The third main goal has been in danger to be overlooked for the last ten years. With respect to this point the Netherlands could learn from Norway, Sweden, France and Germany. In these countries much more attention has been given, not only in general but also in vocational education, to general aspects of education: personal development, cultural and social education. In particular in the Netherlands, where half of the adolescents attend vocational education, more attention should be paid to social integration, citizenship and social/cultural education.

CONCLUSIES UIT HET LEONARDO PROJECT INTEQUAL VOOR HET SECUNDAIR BEROEPSONDERWIJS IN NEDERLAND

Trudy Moerkamp & Eva Voncken

In de periode 1996-1998 is een vergelijkende studie uitgevoerd in zeven EU/EFTA-landen: Frankrijk, Noorwegen, Oostenrijk, Duitsland, Zweden, Engeland en Nederland. Het project werd uitgevoerd binnen het Leonardo programma met betrekking tot de centrale vraag: "how to increase the attractiveness and status of initial vocational education and training".

Het onderwerp van de gemeenschappelijke studie was de mogelijkheid die er in de landen geboden wordt om parallel aan de beroepsopleiding een kwalificatie te verwerven die toegang geeft tot het hoger onderwijs. In sommige landen werden relatief nieuwe opleidingen met een dubbelkwalificerend karakter bestudeerd of pilots (Oostenrijk en Duitsland). In andere landen betrof het opleidingen of leerroutes met een reeds gevestigde positie in het systeem voor beroepsonderwijs (Frankrijk, Nederland, Engeland). In Zweden en Noorwegen werden innovaties bestudeerd die het gehele onderwijssysteem betroffen.

In deze notitie worden de resultaten van de studies in de zeven landen geanalyseerd tegen het licht van de Nederlandse situatie. In het kort worden enkele conclusies geformuleerd voor het Nederlandse beroepsonderwijs: welke lessen kunnen worden geleerd van de andere zes landen, welke gemeenschappelijke problemen doen zich voor, welke ontwikkelingen in de andere zes landen zouden ten behoeve van de Nederlandse situatie een nadere studie waard zijn.

1 De positie van het Nederlandse beroepsonderwijs

In vergelijking met de andere europese landen, heeft het Nederlandse beroepsonderwijs een tamelijk bijzondere positie. In geen van de andere landen zijn de leerwegen in het algemeen onderwijs en de leerwegen in het (schoolse) beroepsonderwijs zo sterk van elkaar gescheiden. De meeste landen kennen op z'n minst de (reguliere) mogelijkheid om over te stappen van de beroepsgerichte leerweg naar de algemene. Verdergaande vormen van integratie door bijvoorbeeld de mogelijkheid om vakken of modulen uit beide leerwegen te kiezen, zien we bijvoorbeeld in Engeland. In Zweden en Noorwegen zijn beide leerwegen geheel geïntegreerd.

Integratie van algemeen onderwijs en beroepsonderwijs is in de andere europese landen een belangrijk item. In Nederland staat dit onderwerp niet op de agenda.

Het is de vraag of het ondanks of dankzij deze scheiding van leerwegen is, dat het Nederlands secundair beroepsonderwijs succesvol is in die zin dat relatief veel leerlingen een opleiding volgen in het beroepsonderwijs. Ongeveer 50% van de 16-17 jarigen volgt een studie in het secundair beroepsonderwijs. In andere europese landen is het algemeen onderwijs bij verreweg de meeste leerlingen favoriet (bijvoorbeeld in Frankrijk) en heeft het beroepsonderwijs met statusproblemen te kampen.

In veel van de andere landen is er grote belangstelling voor het Nederlandse beroepsonderwijs, omdat er goede resultaten worden behaald met betrekking tot instroom, doorstroom naar de arbeidsmarkt en doorstroom naar hoger onderwijs. Het feit dat het dubbelkwalificerend karakter van het Nederlandse mbo er niet toe geleid heeft dat een grote meerderheid van de leerlingen deze opleiding gebruikt als opstap naar het hoger onderwijs, is voor veel landen een interessant gegeven.

Er zou kunnen worden gesteld dat het Nederlandse secundaire beroepsonderwijs geen statusproblemen heeft. Dit is echter een te simpele stelling. Ook in Nederland geldt waarschijnlijk dat de meeste ouders en leerlingen een schoolloopbaan in het algemeen onderwijs prefereren boven een schoolloopbaan in het beroepsonderwijs. Wellicht is het eerder de sterkere selectie en scheiding van leerwegen in de eerste fase van het voortgezet onderwijs, die tot een relatief grote toestroom naar het secundair beroepsonderwijs leidt. In de meeste andere landen is het onderwijs tot 15/16-jarige leeftijd geïntegreerd. Systematische gegevens over keuzes en voorkeuren van ouders en leerlingen in Nederland met betrekking tot de keuze voor beroepsonderwijs of algemeen onderwijs, zijn echter niet voorhanden.

2 Brede beroepsvoorbereiding en beroepskwalificatie

In de meeste landen doet zich het dilemma voor: hoe kunnen leerlingen in het beroepsonderwijs zodanig opleid worden dat ze gekwalificeerd zijn voor directe intrede op de arbeidsmarkt zonder dat het beroepsonderwijs zijn algemene en brede karakter verliest. Deze vraag is belangrijk uit het oogpunt van dubbelkwalificaties, omdat een brede opleiding doorstroom naar hoger onderwijs mogelijk maakt. Maar de vraag is ook van belang met het oog op flexibiliteit op de arbeidsmarkt.

In Frankrijk, Engeland, Zweden en Noorwegen zijn of worden er maatregelen genomen om het aantal beroepsrichtingen te beperken. De keerzijde van deze verbreding en veralgemening is dat het beroepsonderwijs eerder 'pre-vocational' wordt dan 'vocational'. Bijvoorbeeld in Engeland wordt men met het probleem geconfronteerd dat de GNVQ's nauwelijks een beroepskwalificerend karakter hebben. Door het overgrote deel van de leerlingen (80%) wordt deze leerroute dan ook gebruikt als doorstroomroute naar het hoger onderwijs. In Nederland kennen we dit probleem nog niet, hoewel het doorstuderen in het hbo ook hier steeds populairder wordt. Tot nu toe slaagt het beroepsonderwijs in Nederland er echter goed in, om gekwalificeerde studenten af te leveren die bij werkgevers zeer in trek zijn. Toch kan Nederland iets leren van de 'verbredings-discussie' in de andere Europese landen. Deze verbreding is er vooral op gericht om studenten een brede basis te bieden met relatief veel algemene elementen, zodat er een goede ondergrond is voor verdere studie en levenslang leren. Met het oog op toekomstige ontwikkelingen op de arbeidsmarkt zou dit een strategie kunnen zijn die niet zonder meer afgewezen moet worden.

De Franse, Engelse en Nederlandse partners in het INTEQUAL project zijn bezig met de voorbereiding van een vervolgstudie die vooral betrekking heeft op dit punt. In deze studie zullen, veel concreter dan nu mogelijk was, curricula van beroepsopleidingen in de drie landen geanalyseerd worden. Belangrijke begrippen bij deze analyse zijn: toegepaste kennis versus beroepskwalificatie, sleutelkwalificaties, core-skills.

3 Flexibele leerroutes en individuele keuzes

Zoals hiervoor al is gezegd zijn in Nederland het beroepsonderwijs en het algemeen onderwijs twee geheel van elkaar gescheiden systemen. Toch lijkt het vanuit de ervaringen in andere europese landen niet onzinnig, om enige vorm van integratie tussen beide systemen op z'n minst ter discussie te stellen. In Engeland, Zweden en Noorwegen hebben de leerlingen de mogelijkheid om beroepsgerichte vakken en algemene vakken met elkaar te combineren. Dit biedt leerlingen bijvoorbeeld de mogelijkheid om zich binnen het beroepsonderwijs voor te bereiden op een vervolgstudie in het hoger onderwijs. In Nederland zijn er ingewikkelde discussies gewijd aan de doorstroomkwalificatie in het mbo. De mogelijkheid om één of enkele vakken in het havo te kiezen had dit probleem wellicht makkelijker kunnen oplossen. Maar ook voor het algemeen onderwijs zou het bieden van keuze mogelijkheden 'door de systemen heen' perspectief kunnen bieden. Bijvoorbeeld met het oog op de bevordering van keuzes voor de techniek, zou het voor havo/vwo leerlingen mogelijk moeten zijn om technische vakken (of toegepaste science-vakken) in het

beroepsonderwijs te kiezen. Dit zou wellicht ook de 'omwegen' van havo-gediplomeerden via mbo naar hbo kunnen voorkomen.

4 Didactiek van het (beroeps)onderwijs

In veel europese landen, -met name in Duitsland, Engeland, Noorwegen en Zweden-, is er binnen de beroepsgerichte leerwegen al langere tijd een traditie van projectmatig werken, vakkenintegratie en actief onderwijs. In Engeland wordt expliciet gewezen op de grote nadelen van het gemoduleerde onderwijs waarin vooral deelvaardigheden verworven en getoetst worden en integratie van kennis en vaardigheden te weinig aandacht krijgt. Ook in Nederland lijkt het strikte gemoduleerde onderwijs op z'n retour. Er wordt geëxperimenteerd met probleemgestuurd onderwijs of andere vormen van projectmatig werken. Omdat er in de andere europese landen al langer ervaring is opgedaan met deze wijze van werken, zou een nadere studie van de ervaringen, problemen en mogelijkheden, voor- en nadelen, de moeite waard zijn.

5 Algemene vorming binnen beroepsopleidingen

In vergelijking met de andere Europese landen is het beroepsonderwijs in Nederland zeer pragmatisch, economisch gericht en utilistisch. Een uitzondering is Engeland, dat in dit opzicht sterk op Nederland lijkt. In Duitsland, Frankrijk, Zweden en Noorwegen wordt er in het beroepsonderwijs niet alleen gekeken naar kwalificaties die nuttig en belangrijk zijn voor de directe beroepsonderwijs, maar wordt aan het onderwijs in het algemeen, -dus ook aan het beroepsonderwijs-, ook altijd een vormende waarde toegekend. In de genoemde landen gebeurt dit vanuit verschillende tradities. In Frankrijk staat vooral kennis van en deelname aan de cultuur voorop. In met name Noorwegen en Duitsland gaat het vooral om 'normen en waarden' en vorming van de persoonlijkheid. In Zweden en Noorwegen kent men een core-curriculum dat gelijk is voor zowel leerlingen in de algemene opleidingen als leerlingen in de beroepsopleidingen. Het gaat dan om vakken als: moderne vreemde talen, creatieve vakken, maatschappijleer.

Uiteraard wordt ook in Nederland erkent dat het beroepsonderwijs een functie heeft in de 'maatschappelijke kwalificatie' van leerlingen. Deze derde kwalificatie-functie van het beroepsonderwijs is zelfs in de wet vastgelegd en er zijn, met vallen en opstaan, eindtermen ontwikkeld voor MCK. De maatschappelijke kwalificatie van leerlingen is echter in de loop der

jaren steeds beroepsgerichter ingevuld. Vaak gebeurt dit ook onder verwijzing naar de motivatie van leerlingen.

Vanuit de ervaringen in andere europese landen, met name Duitsland, Zweden, Noorwegen en misschien Frankrijk, zou de maatschappelijke kwalificatie van leerlingen in het beroepsonderwijs opnieuw bezien moeten worden. Juist omdat er in Nederland zo'n groot deel van de jongeren naar het beroepsonderwijs gaat, is deze onderwijsvorm van groot belang als het gaat om zaken als burgerschapsvorming, sociale integratie, culturele vorming en maatschappelijke participatie.

Chapter 12

NORWAY: CONCLUSIONS

Tor Bergli, Egil Frøyland & Lillian Larsen

A comprehensive reform of the upper secondary education system - Reform 94 - has been the object of this Norwegian study including some mini-studies of project work at selected schools. Here we recapitulate main issues, findings and present some tentative suggestions.

What is understood by 'parity of esteem' and 'integrated learning processes'?

In Norway, the expression 'parity of esteem' is first and foremost associated with equality of education and in particular parity of esteem of general and vocational education. In Reform 94 it is an explicit aim to abolish the general - vocational education divide. 'The integrated human being' is heralded as the ultimate aim. 'Integrated learning processes' is advocated through students' self-reliant learning, cross-disciplinary project work and studies.

What organisational or curricular frames facilitate integrated learning processes?

Reform 94 has been successful in opening new pathways to matriculation qualification for vocational students. In 1996 2 200 and 1997 4 000 vocational students opted for the 'Advanced course II General Subjects Supplement' leading to matriculation qualifications. In particular many students from the girl dominated tracks 'Health and Social Studies' and 'Arts, Crafts and Social Studies' proceed to higher education. These tracks are perceived as an alternative, and less rigorous pathway to higher education.

The combination of 'generalised' vocational tracks and higher enrollment (96% of cohort) to upper secondary schools have exacerbated the motivational problems of slow learners. Individual study programmes is an option for students with special learning disabilities. The schools and teachers are expected to cope with individual differences within the ordinary classes for the benefit of social integration.

The integration of vocational specializations in ten broader Foundation courses has been more or less accepted. In Reform 94 the main model for acquiring trade certificate is 2

years in school + 2 years in apprenticeship. The approved apprenticeship enterprises are responsible for providing working and learning tasks which will qualify the trainee for the trade test. The recruitment to vocational education has increased substantially after the introduction of Reform 94 providing evidence of enhanced attractiveness of vocational education.

The timetable, with specific numbers of subjects and periods, demarcates domains of knowledge, preprogrammes use of time and defines the role and basis for teachers' salary. The system has a rigid structure With the introduction of Reform 94 more time was allotted to general subjects in the vocational streams, and consequently leaving less time for open-ended learning task. The organisational and curriculum structures appear to be incompatible with the objective of facilitating integrated and self-reliant learning processes.

What methods have been conducive for promoting integrated learning processes?

In Reform 94 four modes of integrative learning processes have been identified (Bergli 1997):

(1) General subjects are illustrated with examples from vocational specialisations. The domain of subject knowledge is rarely questioned or transgressed.

(2) Vocational topics/subjects being enriched through search for relevant theory - often multi-disciplinary or cross-curricular approach. The thematic point of departure may be a subject-defined, textbook problem or an encountered problem in the workshop.

(3) Project work - intensive period of one or two week in which ordinary timetable is suspended. Students have to take responsibility for planning, performing and reporting. The students are expected to report on both work procedures, processes and work outcome.

(4) Work task assignments. Trainees can be assigned real work tasks in the school workshops, during temporary placements in enterprises and as apprentices. The work tasks may be much the same, but the working environment and the mode and degree of supervision or tutoring will be different.

Evaluation reports based on student questionnaires indicate that in general the students experience little integration of general and vocational subjects.

Trainees shall record work and learning tasks in a Portfolio of evidence. The declared aim of this document is to strengthen the trainees' systematic and reflective learning through the working process, i e stimulate deliberate integration of working and learning elements. The Teachers Union of Norway has boycotted the Portfolio of evidence after the system was imposed for all upper secondary education. The Ministry of Education has taken the union to the Labour Court and the Court has ruled in favour of the Ministry. The Teachers' Union do accept the legality, but not the legitimacy of the imposed Portfolio of evidence.

Main conclusions:

- Reform '94 has enhanced the attractiveness of vocational education as evidenced by higher enrolment and provision of more apprenticeship placements, ie 'parity of esteem' has improved. The new curriculum structure has been successful in providing pathways leading to double qualifications, ie to skilled employment and higher education. On the other hand, the problems of motivation and drop-out represent a formidable challenge.
- The integration of vocational specialisations in Foundation courses has been generally accepted. But the expansion of general subjects in vocational tracks has marginally lead to more integration of vocational and general subjects.
- Introduction of mandatory project work has for a limited period of time paved the way for student group work of a multi-disciplinary nature in which the teachers must adapt to new roles as tutors and new modes of collaboration. In project work practice and theory have been integrated.
- New modes of synoptic assessment have stimulated more integrative application of general subject knowledge and skills within relevant vocational contexts.
- The sequential model of 2 years in school + 2 years in apprenticeship has so far lead to relatively little integration between schools and enterprises. More public resources are made available for strengthening apprenticeship enterprises as learning arenas.

Reflections on national innovative schemes and international networking and cooperation

In an international perspective Reform 94 has been successful in enhancing the attractiveness of vocational education and in paving the way for dual qualifications, but the intended aims of changing educational practices has only marginally been achieved. There appear to be contradictions in terms between the rigidity inherent in the curricular and organisational structure and the flexibility required for accommodating integrated, and self-directed learning processes. Consequently, there are good reasons for reviewing organisational and curricular frames and established teaching practices in upper secondary education in Norway.

Innovative schemes have been conducted in Sweden and Brandenburg/Germany from which Norwegian policy-makers and practitioners can and should capitalise. This LEONARDO project has established the foundation of a network which may promote international cooperation in this field.

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NORGE: KONKLUSJONER

Tor Bergli, Egil Frøyland & Lillian Larsen

Reform 94, som er en enhetskolereform for videregående opplæring, har vært målet for denne norske studien som også omfatter ministudier av prosjektorganisert arbeid ved noen utvalgte skoler. Her oppsummerer vi hovedresultater, funn og presenterer noen foreløpige forslag.

Hva forstår vi med «likeverdig vurdering» og «integrerte læringsprosesser» ?

I Norge har uttrykket «likeverdig vurdering» først og fremst blitt forstått som likhet i opplæring og spesielt likeverdighet ved vurdering av generell opplæring og yrkesopplæring. I Reform 94 er et uttalt mål å bygge bro over kløften mellom generell og yrkesrettet opplæring. «Det integrerte menneske» er forkynt å være det endelige mål. «Integrerte læringsprosesser» skal fremmes gjennom elevenes ansvar for egen læring, tverrfaglige prosjekter og studier.

Hvilke organisatoriske eller læreplanmessige rammer fremmer integrerte læringsprosesser ?

Med reform 94 har en lagt til rette for alternative veier fram til studiekompetanse for elever i yrkesfaglige studieretninger. I 1996 valgte 2200 og i 1997 valgte 4000 elever i yrkesfaglige studieretninger videregående kurs II i allmennfaglig påbygning. Dette kurset fører til generell studiekompetanse, og oppfattes som et mindre rigorøst alternativ til å oppnå dette enn gjennom allmennfaglige studieretninger. Spesielt har mange elever fra de jentedominerte studieretningene helse- og sosialfag og formgivningsfag fortsatt til høgere utdanning.

Kombinasjonen av bredere yrkesfaglige grunnkurs og høgere deltakelse (96 % av årskullet) i videregående utdanning har i sterkere grad synliggjort de svake elevenes motivasjonsproblemer. Individuelle opplæringsplaner er en mulighet for elever med spesielle lærevansker. Det forventes at skoler og lærere skal løse differensieringsproblemer innenfor ordinære klasser, dette for å fremme sosial integrasjon.

Integreringen av yrkesfaglig spesialisering i ti brede grunnkurs er mer eller mindre akseptert. I reform 94 er hovedmodellen for å oppnå fag- eller svennebrev to års opplæring i skole og to års læretid i bedrift. De godkjente lærebedrifter er ansvarlige for å legge til rette for arbeids- og læringsoppgaver som kvalifiserer lærlingene for fagprøven. Rekrutteringen til yrkesfag har økt betraktelig etter innføringen av Reform 94. Dette tyder på en økt status for yrkesopplæringen.

Timeplanene med sin oppdeling i fag og timer har en rigid struktur. De markerer kunnskapsområder eller fag, definerer bruk av tid, tilskriver roller og er basis for lærernes lønn. Med reform 94 brukes mer tid til allmenne fag på de yrkesfaglige studieretningene. Konsekvensen av dette er mindre tid til åpne læringsoppgaver. Det kan synes som om de organisatoriske og læreplanmessige rammene er uforenlige med målet om å fremme integrerte og selvstyrte læringsprosesser.

Hvilke metoder har bidratt til å fremme integrerte læringsprosesser ?

I reform 94 har man identifisert fire hovedarbeidsmåter som har som målsetning å generere integrerte læringsprosesser (Bergli 1997):

(1) Allmenne fag illustreres med eksempler fra yrkesfagene. Utgangspunkt og fokusering forblir gjerne allmennfaglig, faggrensene blir sjelden overskredet eller drøftet.

(2) Tverrfaglige oppgaver med utgangspunkt i yrkesfagene. Temaene kan være hentet fra skolefaget eller være et opplevd problem i verkstedet. Problemstillingene bearbeides så gjennom litteraturstudier eller annen «teorisøkning».

(3) Prosjektarbeid. Intensive perioder over en til to uker hvor den ordinære timeplanen legges til side. Elevene tar ansvar for planlegging, gjennomføring og rapportering. Det forventes at elevene rapporterer om arbeidsprosedyrer, gruppeprosesser og resultater.

(4) Arbeidsoppdrag. Elevene kan utføre reelle arbeidsoppgaver på skolen, ved utplasseringer i bedrift eller som lærlinger. Arbeidsoppgavene kan stort sett være like, mens arbeidsomgivelser og graden av veiledning vil variere.

Evalueringsresultater basert på spørreundersøkelser til elever indikerer at generelt opplever elevene liten integrering mellom allmenne fag og yrkesfag.

Elever og lærlinger skal rapportere arbeid og læringsoppgaver i Opplæringsboka. Det offisielle mål for Opplæringsboka er at den skal styrke elevenes og lærlingenes syste-

matiske arbeid og refleksjon gjennom arbeidsprosessen. Den skal bidra til å integrere arbeids- og læringsoppgaver. Lærerforbundet i Norge har boikottet Opplæringsboka etter at den ble innført for all videregående opplæring. Kirke- utdannings- og forskningsdepartementet (KUF) meldte Lærerforbundet inn for Arbeidsretten, hvor departementet fikk medhold. Lærerforbundet aksepterer KUFs rett til å innføre Opplæringsboka, men ikke måten den påtvinges lærerne.

Hovedkonklusjoner:

- Reform 94 har gjort yrkesopplæringen mer attraktiv sett ut fra høgere søkning og økningen i antall lærlingeplasser. Den «likeverdige vurderingen» har med andre ord økt. Den nye læreplanstrukturen har lykkes i å legge til rette for valg som leder til «doble kvalifikasjoner» i form av fagbrev og studiekompetanse. På den annen side representerer motivasjonsproblemer og studieavbrudd store utfordringer.
- Opprettelsen av brede grunnkurs er generelt akseptert. Økningen av allmenne fag i de yrkesfaglige studieretninger har ikke ført til økt integrering av yrkesfag og allmenne fag.
- Innføringen av prosjektarbeid har ført til at elevene arbeider gruppevis med tverrfaglige problemstillinger og oppgaver i definerte tidsperioder. I disse periodene må lærerne tilpasse seg nye roller som veiledere og nye samarbeidsformer. I prosjektarbeid er teori og praksis integrert.
- Nye vurderingsformer har stimulert integrering av generelle kunnskaper og ferdigheter i en relevant yrkesfaglig kontekst.
- Modellen med to års opplæring i skole og to år som lærling i bedrift har så langt ført til liten integrering mellom læring i skole og læring i bedrift. Større offentlige midler er gjort tilgjengelige for å styrke lærlingsbedriftene som læringsarenaer.

Refleksjoner over nasjonale utviklingsplaner og internasjonale nettverk og samarbeid

I et internasjonalt perspektiv har Reform 94 lykkes i å øke status for yrkesopplæringen og legge til rette for «doble kvalifikasjoner», men målene om å endre den pedagogiske praksis har i liten grad blitt nådd. Det synes å være motsetninger mellom de rigide organisatoriske og læreplanmessige rammer og den fleksibilitet som kreves for tilrettelegging av integrert, selvstyrt læring. Det er derfor nødvendig å vurdere de organisatoriske og læreplanmessige rammer og etablert undervisningspraksis i videregående opplæring.

Norske policy-makere kan høste erfaringer fra utviklingsforsøk gjort i Sverige og Brandenburg/Tyskland. Leonardo-prosjektet har etablert et grunnlag for et nettverk som kan fremme internasjonalt samarbeid på dette området.

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Chapter 13

THE SWEDISH NATIONAL CONCLUSIONS

Göran Arman, Robert Höghielm & Owe Liljefelt

Overall it can be said that vocational education has attracted a certain interest in Europe both in political circles and from representatives engaged in several forms of industry and, at least in Sweden, particularly the manufacturing industry. In Sweden one of the catchwords has been competence, however the interpretation of this notion has, as one could expect, been somewhat differentiated depending on the arena of discussion. In a broad sense improved competence should, apart from the professional implication, lead to parity of esteem, and the vocational education was subject to an academisation in an effort to make it possible for the students choosing that route to get access to higher education.

Since the vocational education is expanding in the academic area it is in a way submitted to the traditions and culture in that area. Students taking advantage of the possibilities provided by enlarged general education would no doubt benefit from the reform while those with a more practical disposition will see it as a burden. Certain programmes are considered as less prestigious then others, an opinion not only expressed by students but even by teachers. Those differences in status and prestige between teachers, and as a consequence between students, could possibly be due to the fact that vocational teachers acquire considerably less academic education compared to teachers in general subjects. One of the ambitions connected with the changes in the upper secondary education over the years, not only the latest reform, has been to reduce the social gap between the different pathways of education and the participants herein. This has not happened; there are even indications that the gap has to some extent increased. The attractiveness of some vocational programmes is low, while attention is focused on the Industry Programme where difficulties to recruit students have been experienced.

The teachers have faced great challenges with the new curricula, not every teacher has had knowledge of the motives and the underlying philosophy of the reform. There are examples of teachers who know the reform but do not accept it , and others who find confirmation that their way of teaching is in line with the reform. There are also an ever increasing group of teachers who see the reform as an opportunity to renew the peda-

gogics and didactic forms of teaching in a way that both they themselves and the students finds stimulating and rewarding. In the incipient phase of the reform co-operation between teachers was considered to be more difficult then in the former system. Today there is an increasing level of contact between teachers, and the real potential of development, as our national study verifies, lies in the schools were the vocational and general subject teachers co-operate to integrate their subjects.

The Swedish curricula leave freedom of movement both for the students to make their choice of certain courses and for the teachers to perform their teaching. Vocational education in this concept is not intended to be a complete education in a certain occupation but rather a prepatory stage, even though at an advanced level, from where the employer should finalise the education at a specialist level. In the previous system there were about 500 options which has been reduced to 16 programmes divided into 50 branches of which 43 are vocational.

There is an inherent weakness with this system since some employers (smaller enterprises) do not have the means to invest in human capital in the form of education but rather employ skilled staff. In the Norwegian system the students will benefit from a 2 year period of apprenticeship at a chosen workplace. This should be compared to 15 weeks in the Swedish model. It can be assumed that models with apprenticeship, e.g. the German model, will be looked into in the future. Contrary to the common knowledge, there is a provision of vocational education with apprenticeship in Sweden, however, only with a handful of students. The organisation with divided responsibility between the municipalities and the employers is considered to be the reason for this, together with the prevailing legislation which sees the student as an employee among others.

During the course of the INTEQUAL project it had come clear that most of the participating countries have a consensus view on the need of general subjects in vocational education both to increase the general competence in order to make the students more flexible at the labour market and to enhance their social integration.

NATIONELLA SLUTSATSER: SVERIGE

Göran Arman, Robert Höghielm & Owe Liljefelt

Allmänt kan sägas att yrkesutbildning har tilldragit sig ett visst intresse både i politiska cirklar och bland representanter involverade i olika former av industri och, åtminstone i Sverige, särskilt från tillverkningsindustrin. I Sverige har ett av slagorden varit kompetens, emellertid har tolkningen av detta begrepp, vilket man kunde förvänta sig, varit något olika beroende på i vilken arena det har diskuterats. I en vid mening kan förbättrad kompetens, bortsett från den yrkesmässiga innebörden, leda till jämlikhet. Yrkesutbildningen akademiserades i en ansats att göra det möjligt för studenter vilka valt denna utbildningsväg att få tillgång till utbildning på högskole- och universitetsnivå.

Då yrkesutbildningen expanderar på akademiska området så är den på sätt och vis underkastad rådande traditioner och kultur från detta område. Studenter vilka utnyttjar möjligheterna av det utökade teoretiska innehållet vill utan tvivel dra nytta av reformen medan de med en mer praktisk disposition kommer att se den som en belastning. Vissa program är betraktade som mindre prestigefyllda än andra, en åsikt inte bara uttalad av studenterna utan även från lärare. Dessa skillnader i status och prestige mellan lärare och som en konsekvens även studenterna kan möjligen bero på att yrkeslärarna jämfört med lärare i teoretiska ämnen har en betydligt mindre omfattning av akademisk utbildning.

En av ambitionerna med förändringarna av gymnasieskolan genom åren, inte bara den senaste reformen, har varit att minska den sociala klyftan mellan de olika utbildningsvägarna och deltagarna. Detta har inte skett, det finns även indikationer att klyftan har vidgats. Attraktionen hos vissa av de yrkesinriktade programmen är låg, särskilt Industriprogrammet där svårigheter att rekrytera elever har upplevts.

Lärarna har mött utmaningar med den nya läroplanen. Inte alla lärare har kunskap om motiven och den underliggande filosofin kring reformen. Det finns exempel på lärare vilka känner till reformen men inte accepterar den och andra vilka har funnit bekräftelse på att deras sätt att undervisa varit i linje med reformen. Det är också en allt större grupp av lärare vilka ser reformen som en möjlighet att förnya sina pedagogiska och didaktiska former att undervisa och där både de själva och studenterna finner det stimulerande och uppmuntrande. I inledningen av reformen betraktades samarbete mellan

lärare som svårare än i det gamla systemet. Idag är det en ökande grad av kontakt mellan lärare och den verkliga utvecklingspotentialen, vilket vår nationella studie bekräftar, ligger vid skolor där lärare i yrkesämnen och lärare i teoretiska ämnen samarbetar för att integrera sina respektive ämnen.

Den Svenska läroplanen lämnar frihet för såväl studenternas val av vissa kurser och läramas former att undervisa. Yrkesundervisning i denna form är inte avsedd att vara en komplett undervisning till ett specifikt yrke utan snarare en förberedande yrkesundervisning där arbetsgivaren ska avsluta utbildningen till specialistnivå. I det tidigare systemet var det ungefär 500 studievägar vilka i nuvarande reform reducerats till 16 program uppdelat på 50 grenar varav 43 är yrkesinriktade. Det finns en inbyggd svaghet med detta system då vissa arbetsgivare (mindre företag) inte har resurser att investera i utbildning utan hellre anställer utbildad arbetskraft. I det Norska systemet kan studenterna dra nytta av en 2 årig lärlingsperiod vid en utvald arbetsplats. Detta kan jämföras med 15 veckor i det Svenska systemet. Det kan antagas att i framtiden modeller med inslag av lärlingsutbildning kommer att studeras. Tvärtemot den allmänna uppfattningen finns det en existerande lärlingsutbildning i Sverige, dock endast med en handfull studenter. En organisation med delat ansvar mellan kommuner och arbetsgivare anses vara orsaken tillsammans med den rådande lagstiftningen vilken ser studenterna som en anställd bland andra.

Under framskridandet med INTEQUAL har det framkommit att de flesta deltagarländerna har en samstämmig syn på behovet av kärnämnen i yrkesutbildningen såväl för att öka den allmänna kompetensnivån som att göra studenterna mer flexibla på arbetsmarknaden och att förstärka den sociala integreringen.

Chapter 14

LESSONS OF MUTUAL LEARNING

Sabine Manning

14.1 COMPARATIVE APPROACH

The national conclusions on dual qualifications (chapters 07-13) are to serve a double purpose: they sum up the specific outcome of the project for the country concerned, and they offer lessons for mutual learning within the partnership and beyond. The term lesson in this sense is understood as a message to be taken up in a collaborative process of analysis and development (not in the special sense of drawing a lesson from mistakes!).

The starting point for the comparison was the question "what lessons can we learn from the schemes of dual qualification investigated in this project?". The comparative survey below focuses on the lessons related to the major aspects of the schemes. In addition to this survey there are other stimulating lessons concerning for instance the political issue of parity of esteem between general and vocational education and the semantic problems of terminology. These can be followed up in the individual national conclusions (eg in the chapters 7 and 9 by the Austrian and French partners respectively).

In preparing the comparative survey, the following steps of joint analysis were taken:

1. Each partner (ie one or more colleagues of the institution concerned) prepared a first draft of national conclusions. While this mostly centred on their own scheme, it also included lessons from other schemes.
2. At a joint workshop the major lessons drawn by each partner were presented in a round-table discussion.
3. The partners revised their national conclusions, taking account of the outcome of joint discussion.
4. A preliminary comparative survey of lessons was compiled, based on the joint discussion and the revised draft of national conclusions.

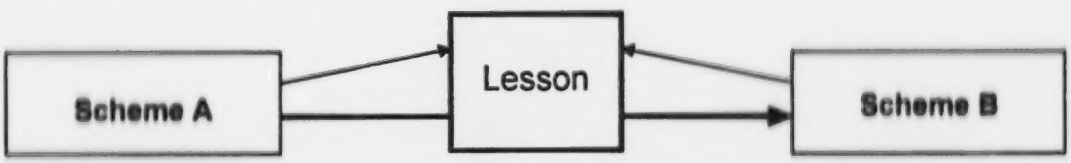
5. The survey was circulated among the partners before the final versions of the national conclusions and of the comparative survey were completed.

In the course of this process, a set of lessons emerged which started out from national perception and developed into a resource of mutual learning.

14.2 SURVEY OF LESSONS

The lessons in general are related to specific schemes, ie a lesson is normally drawn from a given scheme A in order to feed into one's own scheme B. In this process, the lesson is determined by aspects of both scheme A (eg good example) and scheme B (eg problem requiring a solution). This interrelation is of course further influenced by factors such as the perception and experience of the partner drawing the lesson.

COMPARATIVE APPROACH



Following the guiding question (what lessons can we learn form the schemes?) the focus is on the lessons rather than the schemes themselves. The aim is to identify stimulating lessons, including best practice, and not to evaluate the schemes.

The individual lessons have been grouped, in a secondary step of analysis, according to three major aspects:

- the DESIGN of the schemes, with regard to the curriculum, the learning process, practical training and the course structure;
- the IMPACT of the scheme, particularly on the students' pathways and careers;
- the CONTEXT of the educational system and policy.

The lessons are presented individually, without synthesising. They are set out in abbreviated form, but as close to the original wording as possible. This is done in order to retain their national characteristic and specific point of emphasis. While most of the lessons are taken from the national conclusions (chapters 07-13) some of them originate from the joint workshop (see step 2, section 14.1) or have been added directly to the survey (see step 5, section 14.1). For further details of presentation see the note attached to the survey.

SURVEY OF LESSONS

The scheme(s) of this country (these countries)	provide(s) the following **LESSON**	for the scheme(s) in this country (these countries)
	DESIGN: Curriculum	
	Combination of general and vocational learning objectives (partly reflected in the curricula)	all (G/Ba)
	Search for basic qualifications which develop competence and personality	all (G/Ba)
	Promotion of key qualifications in order to enable adaptation to change and life-long learning	all (G/Ba)
	Need of general subjects in vocational education in order to increase general competence, make students more flexible on the labour market and enhance social integration	most (S)
all	Imparting and training key qualifications	all (A)
(E), G, NL	Parallel provision of vocational and general education	A
E, F, N, S	Broad vocational education (as against too much specialisation); however pre-vocational character (such as E, S) to be avoided	NL
F, G, N, S	Attention on general aspects of education: personal development, cutural and social education	NL
F, NL	Close links to enterprises AND strong educational orientation	G/Br*), N**)
G	Integrating academic subjects with professional subjects	F

N	Gradual access to vocational specialisation	F
N	Combination of general vocational education and apprenticeship (2+2 system)	G/Br*)
S	Core subjects	G/Br*)

DESIGN: Learning process

	Implementing new learning methods such as action-orientated learning	all (G/Ba)
all	Emphasizing application-orientated learning, self-training, learning-by-doing	all (A)
E	Evaluation issue (eg synoptic assessment)	F, N*)
E	Emphasis on development of independent learning skills (specially for progression to higher education)	NL
G	Modell with apprenticeship	S
G, N, S	New teaching methods, including project work, integrated learning, active learning	NL
G/Br, S	Innovative curricula for accommodating integrated and self-directed learning processes	N
N	Two-year apprenticeship at a chosen workplace	S

DESIGN: Course structure

(NL)	Course of at least three years required for building a substantial vocational knowledge base and for gaining practical experience	E
E	Offering students a choice between course units: a chance of responsibility	G/Br
E, NL	Allowing for a leeway with training time	F, N**)

IMPACT: Pathways and careers

	Successful combination of general and vocational education helps to enhance students' later professional mobility	(G/Ba)
(NL)	Qualification needs to have a genuine labour market value	E
A	Provision of dual qualification at the level of further (rather than initial) education	
A	Value of a more extended pathway to higher education for those interested in progression from outside the academic route	E
A	Second chance for adults with secondary vocational qualification	G/Br
E, N, S	Flexible system offering transition between general and vocational education; students designing their own pathway through education system	NL

F	Combination of university access qualification (higher level of upper secondary education) and vocational qualification	G/Br
G	Both general labour market utility and facilitating specialist progression (higher education)	E
N	System of financial aid to the firms	F
NL	Dual orientation (balance) as a regular part of the scheme	
NL	Qualification taken by over half the 16-19 age cohort; providing a genuine route into skilled employment, with significant numbers also entering higher education	E

CONTEXT: Educational system and policy

	Successful combination of general and vocational education helps to strengthen credibility of scheme and parity of esteem	(G/Ba)
	Careful management of the reform (implementing scheme); greater cognisance of the experience of other countries	E
	University training of VET teachers in accordance with equality of vocational and general education	G/Ba
A	Training working adults, role played by companies in this training, recognition given to it by employers	F
E, F, NL	Links between the general streams and the technological/professional streams in upper secondary education	F
N	System of trainer-coaching, incl. pedagogical training	A
N	Training of VET teachers	S*)
N, S	Implementing the scheme as part of a reform of the whole system (of secondary education)	G/Br
NL	Scheme strong enough to compete with tracks of general education	
NL	It may be more helpful to change the orientation of the higher education curriculum than always to adapt dual qualifications to higher education	E
NL	(MBO and HBO:) Equilibrium of academic and vocational education	G/Br

NOTES

1. The lessons in each group are arranged in alphabetical order (country codes in first/right columns)
2. The country codes stand for the schemes and their educational context (G/Ba = Bavaria; G/Br = Brandenburg).
3. The ordinary source of the lessons are the national conclusions (chapters 07-13). Lessons presented at the round-table discussion (see step 2, section 14.1) are marked by *) and lessons contributed directly to the survey (see step 5, section 14.1) are marked by **) in the right column.
4. The entries in the left and right columns are explained below.

X	A lesson derived from scheme(s) X for scheme Y	Y
X, Z	A lesson derived from schemes X and Z for scheme Y	Y
(X)	A general lesson associated with scheme X for scheme Y	Y
all / most	A lesson derived from all or most schemes for scheme Y	Y
all	A lesson derived from all schemes for all schemes, incl. scheme Y	all (Y)
	A lesson derived in general for scheme Y	Y
X	A lesson offered by the partner's own scheme to others (unspecified)	

14.3 RESULTS OF THE SURVEY

The results of the comparative survey have to be interpreted with care. In no way can one deduct a ranking of schemes (eg by counting the number of lessons drawn from individual schemes!). Nor would it be appropriate to assume that, for individual aspects, lessons are only provided or required respectively by the schemes actually indicated.

Furthermore, the lessons themselves are fairly different in character. While some of them may reflect an achievement (eg core subjects in Swedish programmes), others may be an attempt at solving a problem (eg synoptic assessment in GNVQ); or while some are long-established features (eg dual orientation of MBO courses), others are still innovative (eg the expansion and renovation of apprenticeships in Norway). Likewise, features perceived as attractive may reflect general regulations rather than the practical evidence (eg university access of Bac Pro graduates). Above all, lessons cannot be assessed without the context of the schemes and systems concerned. In each case, therefore, the national analysis of the scheme has to be consulted.

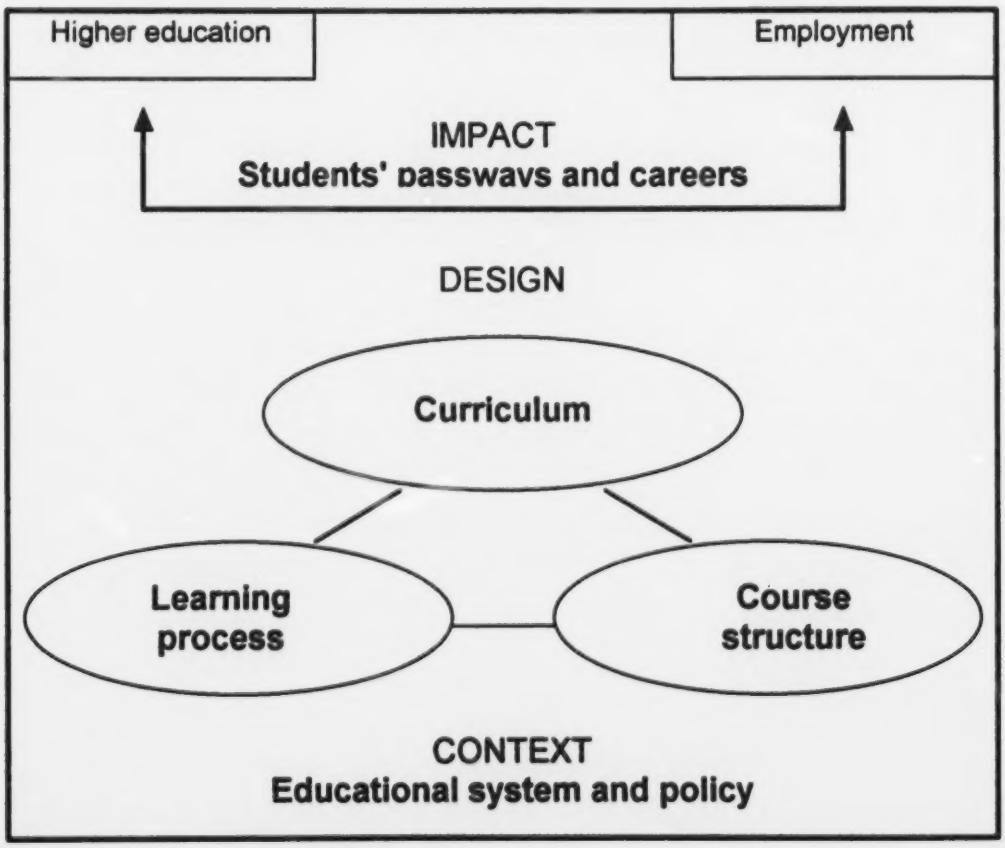
With these reservations in mind, some tentative conclusions will be drawn focusing on the nature and structure of lessons.

(1)

The pattern used for grouping the originally unstructured lessons is a first indicator of where the emphasis lies (see figure below). The lessons clearly cover a broad ground, including the design, the impact and the context of the schemes. While this is of course a reflection of the general approach to the analysis in the whole project, it also confirms the complex character of dual qualifications.

Within the three groups, a major proportion of the lessons (often with similar content in detail) focus on aspects of the design, ie the curriculum and the learning process. This again is probably connected with the approach in this project which has concentrated in the second part on topics such as skills and the learning process. At the same time, the importance of the curricular and didactic design of the schemes is clearly underlined.

MAJOR ASPECTS OF THE SCHEMES OF DUAL QUALIFICATION



(2)

A key question for assessing the nature of the lessons is the extent to which they depict specific characteristics of dual qualifications. These characteristics include, above all, the

interrelation of general and vocational education and the dual orientation towards employment and higher education.

In the group related to the design of the schemes, lessons specific to the dual orientation are at least quantitatively in a minority. This may at first sight be surprising, since the guiding question referring to the schemes obviously implies their characteristics. Instead, the majority of lessons drawn on the curriculum, the learning process and structure of courses could be characteristic of any high standard education, in particular vocational education. Typical examples of these lessons are the acquisition of key qualifications, the provision of core subjects and the development of independent learning skills.

This result is most important in two respect. It shows the relevance of basic qualities of learning for the success of dual qualifications. At the same time, it suggests that schemes of dual qualification are able to have a broader significance for the transfer of good practice within vocational and general education.

In contrast to the first group (related to design), lessons connected with the impact of the schemes are highly specific to the dual orientation. A major criterion of success reflected in several lessons is the equal balance between academic and vocational careers.

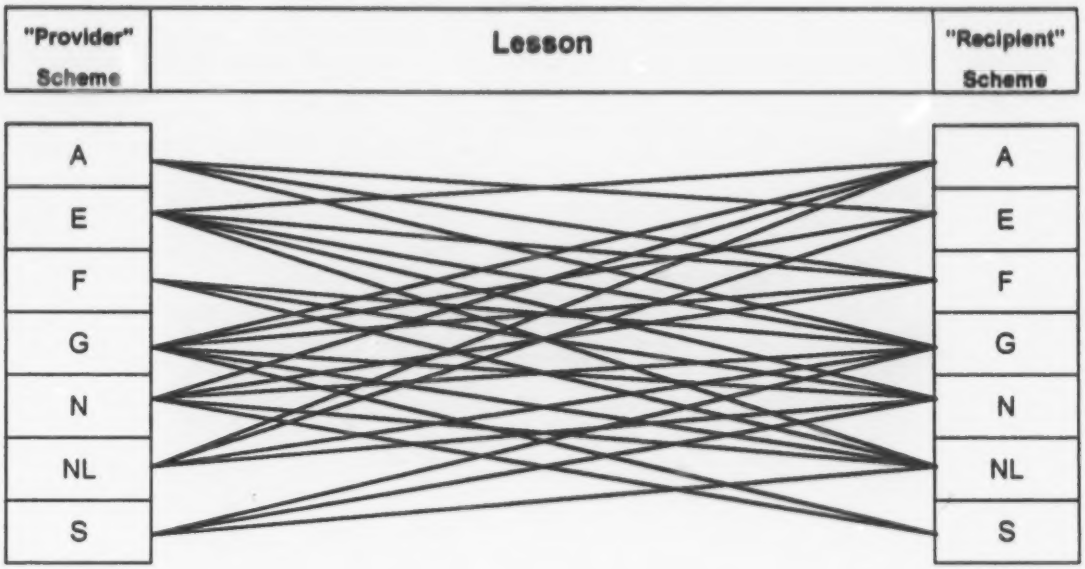
The lessons drawn on the context of dual qualifications also focus on the specific characteristics of the schemes. They reveal the variety of factors determining the success of dual qualifications, including the management of reform, the training of teachers and the links to other educational pathways.

At the same time, the potential of dual qualifications for setting conditions to other components of the education system is recognised. A well established scheme, such as the MBO, is strong enough to compete with other pathways. Furthermore, the higher education curriculum may change its orientation in response to the requirements of the scheme.

(3)

The survey shows that various lessons are drawn across schemes of widely differing character (eg the Swedish core subjects as a lesson for German pilot projects, the Norwegian system of financial aid to the firms as a lesson for the French scheme, or the extended pathways to higher education for skilled workers in Austria as a lesson for England).

DIRECTION OF LESSONS



This broad spectrum of lessons is particularly revealing if related to the hypothetical conclusions arrived at in the first part of the project. These are summarised below:

The evidence implies that the various ways of combining general and vocational education are fairly independent of categories of courses or easily adaptable to the different options. This could suggest that there is considerable opportunity for the exchange and transfer of experience across schemes and national systems.

It is also apparent that the schemes of dual qualification apply to and indeed create both innovative course structures or curricula and the varying didactic approaches, all of which are of significance for the qualitative advance of vocational education and training.

The lessons drawn by the national experts are important as initial evidence: The opportunity of exchanging experience across schemes and systems is obvious. Practical considerations of a transfer of experience, however, exceed the capacity of this partnership.

There is ample scope for drawing further lessons from this study. For this purpose it may be stimulating to observe the variety of comparative approaches adopted by the part-

The lessons drawn by the national experts are important as initial evidence: The opportunity of exchanging experience across schemes and systems is obvious. Practical considerations of a transfer of experience, however, exceed the capacity of this partnership.

There is ample scope for drawing further lessons from this study. For this purpose it may be stimulating to observe the variety of comparative approaches adopted by the partners. The approaches described below are based on the national conclusions (chapters 07-13) and also on the presentation of lessons at the round-table discussion. References in brackets point to the individual partners (by country code) who have provided examples of the approach concerned.

- One may start out from one's own scheme, pointing out features that may set an example for others (N, NL, S); this might lead to the question of how to put this example across, ie how to relate it to corresponding aims or requirements of other schemes.
- Feature first identified in one's own scheme, may match features found interesting in other schemes, or fit into more general feature observed on several schemes. This comparison could influence or alter the assessment of one's own scheme: One might become aware of advantages or disadvantages of one's own scheme (S); the problems associated with one's own scheme might acquire a different weighting (F); the experience of other schemes might back up confirmation (A) or doubt about one's own scheme.
- Also starting out from one's own scheme, one could identify needs or problems and look for possible solutions offered by other schemes (E, F, G/Br, N, NL, S). This is in fact a common approach, even if not spelled out directly, because the interest shown in other schemes is often guided by what is felt to be missing or desirable in one's own scheme.
- The lessons of other schemes may be perceived at different levels. One may establish common features of a more general kind which are considered relevant for one's own scheme or system as well (D/Ba). At a more distinct level, one may focus on specific features shared by certain schemes and identify them as worth considering (E, F, NL). One may also systematically map the other schemes according to individual features that could provide a lesson to ons's own scheme (D/Br).
- Lessons may imply different commitments. Some may be considered as a stimulus for further analysis and debate (E, F, G, N, NL, S), others may take the form of recom-

mendations, including the possibility of tranfer of approaches or solutions to one's own scheme (E, NL, G/Br). At this stage, a careful analysis of the educational and political context is required.

The lessons compiled in this survey are of course preliminary, since they are based on the assessment of the partnership and have not as yet been exposed to a wider audience. The survey is intended, therefore, to provide a stimulus for thorough reading of the evidence presented in the two project reports. This will enrich the lessons suggested here and may also lead to new conclusions. Furthermore, the lessons identified by this partnership should be taken up in national and transnational conferences for detailed discussion with policy makers, practitioners and researchers in education.

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QUALIFICATIONS WITH A DUAL ORIENTATION TOWARDS EMPLOYMENT AND HIGHER EDUCATION

A COMPARATIVE INVESTIGATION OF INNOVATIVE SCHEMES IN SEVEN EUROPEAN COUNTRIES

INTEQUAL REPORT I

Chapter 1	**Summary**
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	Review of National Schemes
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Chapter 5	France: The Vocational Baccalauréat
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Chapter 12	The Schemes in England and the Netherlands
Chapter 13	The Schemes in Austria and Germany
Chapter 14	Focus: Integration of General and Vocational Education
Chapter 15	Comparative Assessment

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Leonardo da Vinci

EUROPEAN PARTNERSHIP PROJECT

CEREQ Marseilles + HIAK Oslo + ibw Vienna + ISB Munich + ITB Bremen + SCO-KI Amsterdam + Stockholm Institute of Education + University of Surrey/Warwick + WIFO Berlin

Qualifications with a Dual Orientation towards Employment and Higher Education

Aim

One of the basic issues in vocational education and training in EU countries is how to increase the attractiveness and status of initial vocational education and training.

One approach initiated in a number of countries is to provide the option for trainees or students of vocational courses to acquire qualifications for university access alongside their vocational qualifications. The resulting qualification has a dual orientation towards both skilled work/employment and studies/higher education (DUAL QUALIFICATION).

The aim of the project is to analyse the potential impact of SCHEMES of DUAL QUALIFICATIONS offered in seven European countries. These schemes include

* vocational programmes or streams within the comprehensive school systems of Norway and Sweden;
* individual qualifications, e.g. the Vocational Baccalauréat (Bac Pro) in France, the General National Vocational Qualification (GNVQ) in England, the long courses in senior secondary vocational education (MBO) in the Netherlands and the WIFI Academy courses in Austria;
* pilot projects within the established systems of vocational education and training in Germany (Bavaria and Brandenburg).

Research Design

In a FIRST PHASE, a comparative analysis of the schemes is carried out based on national case studies. This is achieved on the basis of detailed research questions:

⇒ the national framework of economic, social and educational change;
⇒ the major features of the scheme;
⇒ the educational concepts underlying the scheme;
⇒ the organisational implications of the scheme;
⇒ the impact of the scheme.

In order to identify the degree of integration of general and vocational education within the schemes, two dimensions are distinguished: the relationship of education and training to skilled work, and the relationship of general education to vocational training. A comparative analysis using indicators allows for tentative conclusions to be drawn on the character of the schemes.

In a SECOND PHASE, TOPICS are selected for carrying out collaborative investigations of the schemes across groups of countries. These TOPICS centre on

- **Integrative learning processes**

(Germany/Brandenburg, Norway, Sweden)

This study focuses on the question: What conditions and methods promote integrated learning processes generating dual qualifications? At the classroom or workshop level the partners look into how teachers organise the learning conditions, both between and within subjects. One important learning approach expected to generate integrated competencies centres on task-, problem- and project-based methods.

Research methods applied include observation, interviews, questionnaires and matching different models of organisation and tuition.

- **synoptic assessment**

(England; France, Norway)

Synoptic assessment is devoted to testing candidates' accumulated understanding of a subject (the vocational area) as a whole. This study is related mainly to GNVQ in England, although experience and views from the other two countries are also offered for discussion. The issue is of active policy interest, since the intention is to introduce an element of synoptic assessment into GNVQ in the future.

- **skills for higher education**

(England, the Netherlands)

The researchers draw their findings from their own investigations together with secondary analysis of research on the knowledge, skills and personal qualities required for success in higher education. The concern is how to increase prospects of progression to higher education while also maintaining an orientation towards the labour market as a fundamental aspect of a qualification with a dual orientation.

- **tracing career developments**

(Austria, France, Germany/Bavaria)

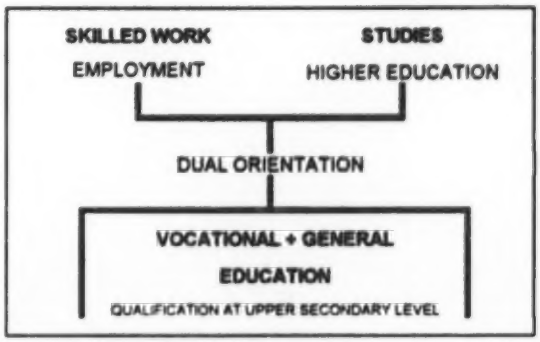
One focal point of this investigation will be to assess the percentage of graduates entering industry-related jobs as against those choosing to pursue university studies.

The evaluation will draw on results stemming from research data compiled in the states in question, including individual personal data and evaluations following completion of dual-qualifying education, and data on the educational measures involved.

Interim Findings

The evidence implies that the various ways of combining general and vocational education are fairly independent of categories of courses or easily adaptable to the different options. This could suggest that there is considerable opportunity for the exchange and transfer of experience across schemes and national systems.

It is also apparent that the schemes of dual qualification apply to and indeed create both innovative course structures or curricula and the varying didactic approaches, all of which are of significance for the qualitative advance of vocational education and training.



Dissemination

A transfer of ideas between researchers, politicians and practitioners is achieved by carrying out interviews with experts/politicians in preparing the national case studies, by focusing questionnaires on students/ graduates of the schemes, by presenting interim findings at workshops with politicians and practitioners, by setting out conclusions for each partner country and by publishing the results in a variety of media.

Project	Participants	Publication
December 1995 to November 1997 **Coordinator:** WIFO/ Sabine Manning, Neue Blumenstr.1, D-10179 Berlin; Tel./Fax:++4930-2421273, E-Mail: WIFO@rz.hu-berlin.de **Support:** European Commission (No: D/95/1/217/S/III.2.a/FPI) **Acronym:** INTEQUAL	Göran Arman, Tor Bergli, Rainer Bremer, Alan Brown, Henri Eckert, Egil Fryland, Robert Höghielm, Edith Jonke-Hauptmann, Gerald Heidegger, Jean-Louis Kirsch, Werner Kusch, Lillian Larsen, Owe Liljefelt, Sabine Manning, Trudy Moerkamp, Monika Thum-Kraft, Eva Voncken	Manning, Sabine (Ed.): Qualifications with a dual orientation towards employment and higher education: a comparative investigation of innovative schemes in seven European countries. Berlin: Wissenschaftsforum Bildung und Gesellschaft e.V. (WIFO). November 1998